

Pedestrianizing Asian Cities



Can Yogyakarta's Malioboro Ave.
Be Transformed? p.24

Bus Rapid Transit Spreads
to Africa and Asia p.4





US Fiddles While Oil Burns

Overseas, an increasing number of cities are taking the difficult steps necessary to reduce their congestion, air pollution, and oil dependence, and to make their cities more livable. Bus Rapid Transit (BRT) projects have started in a dozen cities around the world, and London's successful congestion pricing scheme has finally buried forever the notion that road pricing can never work in a democracy.

After years of Curitiba's BRT system being an anomaly, first Quito, then Kunming and Taipei, then Bogotá, all completed BRT projects. Then cities as diverse as Los Angeles, Delhi, Cape Town, Lima, Mexico City and Guayaquil all began serious design efforts for BRT systems. Beijing, Guatemala City, and several other cities are also considering BRT. Never before have transport experts so widely agreed on anything. ITDP played a critical role in initiating some of the first BRT projects in Asia and Africa, particularly in Jakarta, Delhi, Dar es Salaam, Cape Town, Dakar, Beijing, and Accra. In the fall, we are also bringing London's congestion pricing experts to Brazil to hopefully spread this new best practice to Sao Paulo and Rio.

BRT projects are also proving a useful foot in the door to upgrade pedestrian and bicycling facilities. Most of the new BRT systems all include state-of-the-art pedestrian facilities, and often include new bikeways.

Six containers of ITDP's new 'California Bike,' a safe and good quality urban bike designed by Trek, have already landed in Cape Town, Dakar, and Accra, lifting the image of bicycling for urban commuters. Over 2,000 riders accompanied the Mayor of Accra on a recent bicycle caravan.

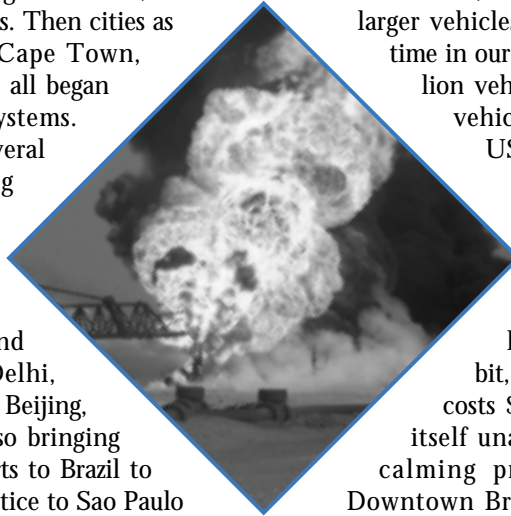
Unfortunately, things in the U.S. are getting worse. As *Sustainable Transport* goes to press, there is a significant threat that Federal funds for the nation's rail system will

be cut in half. While Federal funding for bikeways and public transit systems have been rescued for now, America's Federal BRT program may well be cancelled, despite the impressive success in Los Angeles, Pittsburgh, and Honolulu. Efforts to increase corporate average vehicle fuel efficiency standards (CAFE) were defeated last year. The transport provisions of the Clean Air Act Amendments of 1990, and other decades old achievements may be rolled back.

Meanwhile, Americans have been buying more, larger vehicles in the last two years than at any time in our history. Today, half of the 17.2 million vehicles sold per year are sports utility vehicles and minivans. As a result, the US is consuming more oil than ever before, more than twenty million barrels of oil per day. Less than half of this can be met with oil from US soil.

Here in New York, things don't look much better. If bike use is up a bit, it's because the bus and subway now costs \$2.00 a ride. New York has proven itself unable to implement a single traffic calming project, finally abandoning the Downtown Brooklyn traffic calming pilot after spending over \$1 million on planning and wasting 5 years of the community's time. Tolls on the East River Bridges, mooted briefly as a possible solution to our fiscal crisis, have been shelved. New York City streets are still designed for the convenience of motorists. Mayor Bloomberg and Department of Transport Commissioner Weinshall couldn't care less.

Are we Americans ready to invade other countries without UN authorization, but unwilling to lift a finger to address our own profligate consumption of the world's dwindling oil supplies? Defense Secretary Donald Rumsfeld said the invasion of Iraq had "nothing to do with oil, literally nothing to do with oil." The rest of the world believes differently. ♦



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left: Beijing Road, Shanghai - by Walter Hook

right: BRT station in Quito, Ecuador - by Lloyd Wright

sustainabletransport

is a publication of:

**The Institute for
Transportation and Development Policy**

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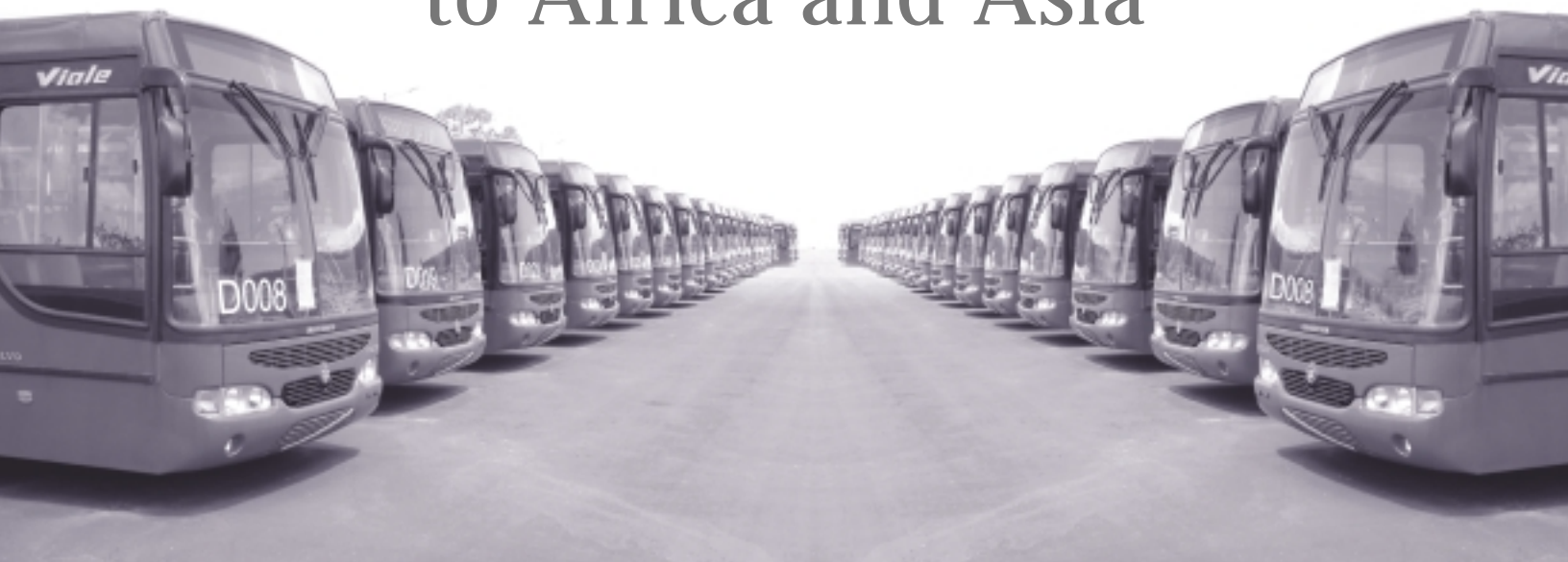
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All views expressed in the articles in this publication are the views of the authors and not necessarily the views of ITDP. *Sustainable Transport* welcomes submissions of articles about non-motorized transportation and information about sustainable transportation activities worldwide.

ITDP is a non-profit advocacy, research and project-implementing agency which seeks to promote the use of non-motorized vehicles (NMTs), improve public transit and support the broader implementation of sustainable transportation policies worldwide. ITDP is registered in the United States as a charitable agency eligible for tax-deductible contributions under the Internal Revenue Service code. Members include bicycle activists, transportation planners, economic development specialists, small businesspeople, environmentalists and other professionals, primarily but not exclusively U.S. citizens.

Bus Rapid Transit Spreads to Africa and Asia



For years, transport experts puzzled over why Curitiba, Brazil's amazing Bus Rapid Transit (BRT) system, developed in the 1970s, had not caught on in other cities. Suddenly, with the dawning of the new millennium, BRT has come of age, in a big way.

Today, dozens of cities across the world have started new Bus Rapid Transit projects. Starting in the late 1990s, new busways were built in cities as diverse as Pittsburg, Honolulu, Rouen, Nagoya, and Kunming. These new systems were important breakthroughs, but none of them matched Curitiba's earlier success.

Then, the completion of Quito's Eco-Via and Bogotá's TransMilenio heralded a new era for BRT. Opened in 2001, TransMilenio is moving over 45,000 passengers per hour per direction at speeds around 25 kph, higher than most metro systems. Not only the facilities, but also the contracting agreements, the ticketing systems, and the information systems, are state of the art. After one year of operation, the system boasted a 100% reduction in fatalities from traffic accidents, 43% reduction in sulfur dioxide emissions, 32% reduction in travel time for users, and an approval rating of 98%. At a ticket cost of only US\$0.40, the system operates at a profit. The initial 35.6 kilometers of exclusive lanes in two corridors is rapidly being expanded to a planned 388 kilometer system that will cover 85% of daily public transit trips by 2015.

But Bogotá's success was expensive, and made possible by a high level of political commitment from a very enlightened mayor. Quito's new Eco-Via, a 25-km system, is not nearly as fancy as TransMilenio, but it shows how much can be done for far less. Quito's new lines are also self-financing at a fare of only US\$0.20. While Bogotá relied heavily on world class international consultants, Quito's system was planned and implemented entirely under the auspices of the city's own talented city planning agency using its standard operating budget. The planning and construction were done at about 1/5 the cost per kilometer of the Bogotá system (about \$1 million/km compared to about \$5 million). Quito's system is also routed through the very narrow streets of its historical core, proving that wide arterials are not a prerequisite for a successful system.

The new success stories in Bogotá and Quito have proven invaluable to increasing the popularity of Bus Rapid Transit among elected officials and planners from cities in Asia, Africa and Latin America. Since 2000, ITDP has spread the word about Bogotá's success by organizing BRT workshops, usually in cooperation with partners, all over the world. Many of them featured Enrique Peñalosa, the former Bogotá mayor. All told, workshops and presentations were given in some 30 cities. Site visits to Bogotá, Quito, and Curitiba, organized or facilitated by ITDP, have

also played a critical role. In January, Cape Town sent a large delegation to Bogotá. Then, in February, ITDP, the World Bank and the Fundación Ciudad Humana hosted over 400 decision makers from 20 countries to participate in the International Seminar on Human Mobility in Bogotá. Many of the participants also went on to ITDP-organized workshops in Quito.

Today, active work on new BRT systems has commenced in countless cities in Latin America, but most impressively BRT is now spreading to Asia and Africa. Beijing, Jakarta, Delhi, Hyderabad, Cape Town, Dakar, Accra, Dar es Salaam, and most recently Dhaka have all started BRT projects. In our efforts to build enthusiasm and political support for BRT, however, ITDP perhaps failed to lay sufficient emphasis on just how complicated and difficult a task it is to design, build, and

local engineering and planning contractors happy. In their enthusiasm for a quick win, they sometimes push their own agencies to develop a BRT corridor on an arbitrarily chosen arterial before a full BRT network can be identified and its links prioritized. They begin the physical design process before anyone on their technical team has a clear idea of how the best BRT systems work. They avoid making the difficult but critical institutional reforms that might upset powerful constituencies, or they jump to some draconian change without consulting the affected parties. They immediately skip to the highly visible (and no doubt lucrative) bus procurement process

before an appropriate technology can be defined and an institutional structure determined. They try to award contracts to friends and allies rather than to those firms that are technically the most competent.

Politicians were inspired by Bogotá's ability to develop an integrated city-wide BRT plan, and design, construct, and begin operations in a first corridor all in under three years. But Bogotá paid top dollar to bring in a world-class consulting firm to oversee the project's management, hired the best busway planners in the business, and the best Colombian law firms. They did not

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Bogotá's bus stations, efficient and modern

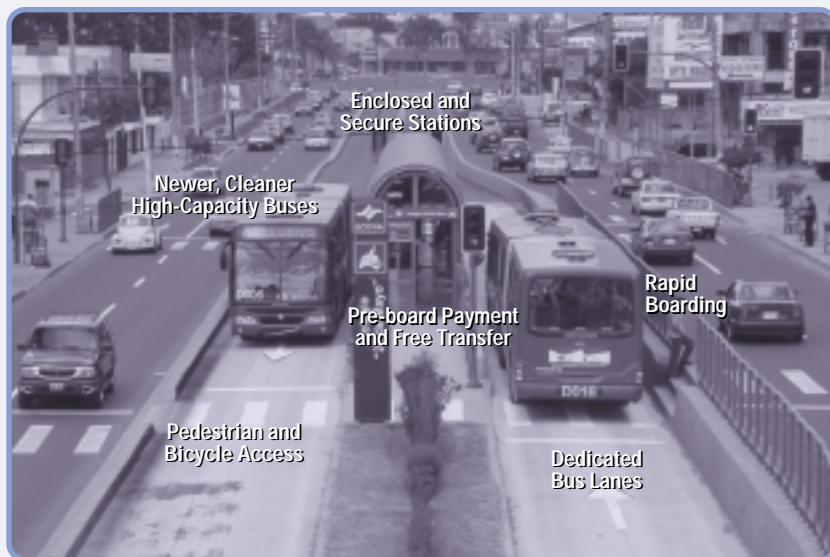
operate a successful BRT system. Less well-known in Asia and Africa are the dozens of failed busway projects scattered throughout Latin America.

The Challenges of Replicating Bogotá

While strong political support is critical to realize BRT projects, political pressure to rapidly implement a BRT system without sufficient planning can threaten its success. Politicians, often facing re-election in one or two years, naturally want to see concrete results as fast as possible. At the same time, they don't want to or can't spend as much money as the job will require. Meanwhile, they want to keep local bus manufacturers and operators, and

BRT is not just a dedicated bus lane, though that is an important element. The best systems also have enclosed, metro-like bus stations. Passengers pay when they enter the station and don't have to pay again to transfer to another line. The bus driver doesn't have to make sure everyone pays the fare, so buses can be designed with multiple large doors, just like a metro car. Because hundreds of passengers can get on and off all at once, the delay is much less than for a normal bus, and comparable to metro systems.

Buses aren't stuck in traffic congestion, so fewer buses can move the same number of passengers. Hence, the systems are far more profitable, and operations can be contracted out to the private sector. As private operators are paid by the distance covered, rather than the number of passengers, the dangerous conditions of buses rushing to pass one another to catch waiting passengers is avoided. Meanwhile, with higher profits, bus operators can afford to buy better, cleaner buses. Most use Euro II-compliant diesel, but some use electric trolley buses, and CNG is being explored on some systems.



Photos: Lloyd Wright



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short-change the project. They spent around \$5 million just on the planning. They used funds from the privatization of Bogotá's state-owned energy operators to finance 48% of the planning and the first phase of construction. New gasoline tax revenues provided 23% of the system's costs and the national government another 19%. The final 10% was obtained from a World Bank loan. Similar options are available to many cities, but they require very strong political commitment.

Bogotá was also able to build on a lot of baseline data previously collected under a JICA-funded transportation master planning study. This was not that expensive, but saved a lot of time. They also involved an expert in participatory decision-making to engage the bus operators in the planning process at a very early stage.

The shortcuts being attempted by many cities are understandable, but these are putting many of these very high profile projects at risk. Piece-meal and premature decisions about route selection, vehicle type, management structure, marketing identity, and integration with existing transit lines all threaten success.

Relying on local staff from within the government and local consultants is feasible, and an essential part of a technology transfer process, but is likely to take time. Though it is much easier for cities to get up to speed on BRT than on rail projects, even those with exceptionally talented staff in positions of leadership need to learn to plan and design a busway.

In many cities in developing countries, baseline transportation data has either not been collected recently, or it was collected in a way not useful for bus system design (ie. it was collected for a metro or highway project). Even if local staff knows how to use the data, they sometimes can't get their hands on it.

All these problems can be overcome with sufficient political commitment, money, and/or time. The case of León, Mexico, shows that success can be

achieved over time with sufficient commitment, and the other articles showcase several projects in earlier stages of development where ITDP is directly involved.

The Next Likely Success: León, Mexico's Caterpillar

León, Mexico is typical of many of Mexico's medium-sized cities, with public transit trips stagnant at about 850,000 trips a day, while car ownership has increased sharply. Currently there is 1 car for every 5 citizens. In 1994, León committed to developing a Bus Rapid Transit system. Now, León's oruga (caterpillar) as it is presented to school kids, called Optibus by the official name, will finally begin operation nine years later.

León is unique in having solved one of the most complex challenges of BRT system planning from the outset. While integration of existing transit operators is often among the last considerations in planned BRT systems, the León project was born from an agreement between the city government and bus owners. The project originated in 1994 with the creation of the Transport Coordination Entity (TCE), a partnership between 13 bus companies, which have since organized their operations into four large companies. Afterwards the city created the Integrated Transport System (TIS), a commission with representatives from the city and state governments, as well as the TCE.

The system's 52 high-platform articulated Volvo buses, diesel-run with Euro III technology, are being built in Brazil for this project. These will be owned by TIS, which is acquiring them at a cost of US\$ 225,000 each plus taxes, and TCE companies will operate the buses. This means that no public bid will be open;

however other bus owners who sell their old buses can replace them with the articulated ones.

The project encompasses a total of 26.1 kilometers distributed in five corridors – 15 kilometers of exclusive lanes and 11.1 in mixed traffic. The corridor's cost per kilometer is US\$1 million, which covers stations, head terminals, medium-sized stations and workshops and small road repairs. No urban improvement in sidewalks or bicycle paths along the corridors has been considered, however.

The average distance between bus stops is 400 meters, but in downtown they are located every 200 meters. Funding for the system has come from the city, the state of Guanajuato, and a trust fund that collects revenue from bus operators and the city.

The Optibus will be the first BRT system in Mexico and has attracted the attention of several cities throughout the country, including Mexico City, where a BRT project is being planned. Because León has solved one of the most complicated issues of BRT planning by teaming with bus operators early on, other cities will follow its



An open-air bus stop on León's new Optibus System.

development with interest. Such a close partnership with the private sector also has to be watched, however. Not having an open bid can increase costs and complicate negotiations, especially the ones related to setting fare prices.

Delhi, India

About 60% of Delhi's 13 million residents are bus passengers, though motorcycle and car use are growing extremely rapidly. Last year, a disorganized conversion to CNG buses left bus passengers frustrated with service disruptions and worsened congestion. Though the city opened the first segment of a new metro system in December, 2002, it will be decades before the \$100 million per kilometer system will serve more than a fraction of those who rely on public transport. Currently, the 8 km line is running at only 30% capacity.

Plans for Delhi's High Capacity Bus System (HCBS) began years ago as part of an effort to create a 130 km wide network of busways. As planning progressed, the Indian Institute of Technology's Transportation Research and Injury Prevention Program (IIT-TRIPP) chose to integrate dedicated bike lanes as a way to ease conflicts between buses and bicycles on city streets, increasing bus speeds and efficiency while reducing cycling injuries.

It wasn't until January 2002, however, during a conference organized by Delhi Transport Corporation with support from Infrastructure Development Finance Company (IDFC) and IIT-Delhi, that Chief Minister Shiela Dikshit announced commencement of the long-delayed HCBS. The conference was supported by SIDA and ITDP also. In November of 2002, the Delhi Government announced plans for seven HCBS pilot corridors. They approved \$6.6 million for infrastructure construction, another \$1.2 million for the procurement of 30 low floor buses, but only about \$100,000 for planning the whole system. Support from US AID Volvo Education and Research Foundation is also helping. Plans to complete two corridors before the municipal elections in November 2003 were then scaled back to one corridor, then half a corridor. Now, it appears unlikely that the first 6.4km half corridor may be completed by April of 2004.

The corridors were not selected as parts of an integrated system, but as separate corridors on roads with wide rights of way, in districts that would not

benefit from the Metro. Because the Delhi government had recently given priority bus routes to operators willing to switch quickly to CNG buses, they did not want to change bus route regulation again prior to the elections. The

The current designs include a one-lane segregated center-lane busway with two lanes at the stations. As the project originally grew out of a concern for bicyclist and pedestrian safety, it still includes new bicycling facilities,



technical team knew there were about 200 buses per hour in the corridor. Since only 30 new buses were to be procured at first, the old buses would continue to use the dedicated corridors. Because the selected corridors did not have a lot of bus origins and destinations, the HCBS team knew early on that the BRT system would have to be open to buses running both on and off the busway corridor. Further complicating matters, IIT-TRIPP had been in negotiations for years with India's two bus manufacturers, Tata and Ashok Leland, to develop a better, lower floor bus for normal urban use. As changing bus designs in India is a huge headache, the project promoters were loathe to force the bus manufacturers to develop yet an additional bus with specifications suited only to the HCBS corridors.

Hence, the BRT had to be designed without the special buses and pre-paid boarding tubes that give the Curitiba and Bogotá systems such high commercial speeds and high capacity.

Parking along one of Delhi's planned HCBS corridors.

improved pedestrian facilities at intersections and bus stops, and also some innovative designs to integrate hawkers into bus station design.

Before work can start, a project management company has to be contracted by the municipal government. This has been delayed by the departure of the supportive commissioner of transport, Sindhushri Khullar, in July. IIT-TRIPP, ITDP, and the other project promoters are hopeful that the contract will be signed before the elections in November. If the current Congress Party government wins the election, as projected, project continuity and a less constrained planning environment should result. If they lose the elections to the BJP (the Hindu nationalist party currently controlling the national government), there is also a good chance

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the HCBS will move forward, as the original concept was developed under a BJP government, but there would be much more uncertainty.

Jakarta, Indonesia

Since at least the 1980s, Jakarta, Indonesia has been planning to upgrade its public transit system. About half of Jakarta's 9 million residents rely on public transit, while the other half drive cars or motorcycles, or take taxis. Public transit is dominated by large buses, but minibuses, bemos, motorized rickshaws (Bajaj), ojeks (motorcycle

of the national government at the time, and conflict between these two plans delayed any progress for years.

With the economic crisis, the triple-decker died, and the metro became less financially viable. With the decentralization that accompanied the transition to democracy, Governor Sutiyoso's administration took control of more financial resources, but also absorbed a greater financial burden for urban public transport. Though the Japanese Bank for International Cooperation has offered to finance a metro at very low interest rates, the city would be responsible for some 30% of the debt. Thus far, DKI Jakarta, beset by other pressing

At first, planning focused only on this one north-south corridor, and was not envisioned as part of a BRT network. Neither the Governor, nor his staff, nor the local consultants contracted to do the work had ever seen a BRT system before, so they lacked a clear vision. Hoping to honor his political commitment, Gov. Sutiyoso pushed staff to move forward with planning despite this lack of expertise, but without increasing staffing levels or financing for the department of transportation, and managerial authority for the project was unclear.

While the regional parliament authorized some \$6 million for the project,



*Jakarta's Blok M bus terminal:
a major bottleneck at the BRT line's southern terminus.*

taxis), and a limited commuter rail system also form part of the mix. Becaks, or cycle rickshaws, were banned again in 2000 after a brief resurgence in 1998.

Prior to the 1998 economic crisis and Indonesia's transition to democracy, plans focused on two conflicting visions for the north-south Sudirman/Thamrin corridor: a metro system (supported by various foreign interests) and a triple-decker highway and light rail line supported primarily by former President Soeharto's daughter. Jakarta's public transit improvements were the concern

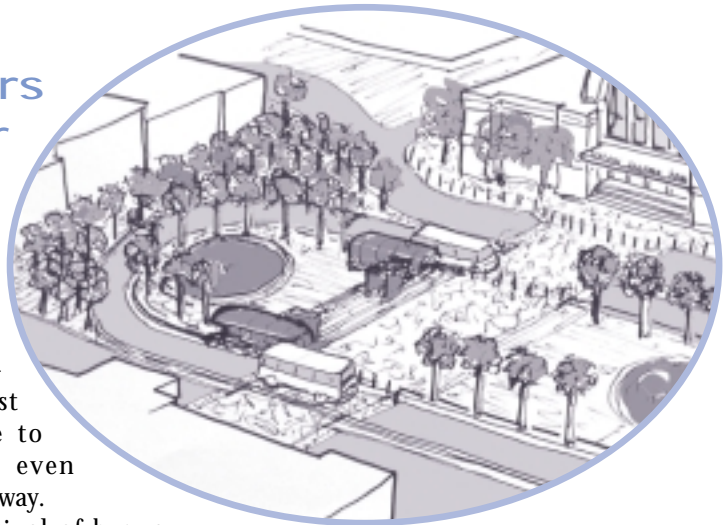
financial needs, has balked at the \$1 billion plus price tag.

In 2001, after a workshop on BRT featuring Enrique Peñalosa, hosted by ITDP, Pelangi, and Jakarta's transportation department, Governor Sutiyoso became convinced that a busway could be built in the same corridor much faster and for much less money than the metro. When Sutiyoso was up for reelection in 2000, he was elected in part based on his promise to implement the busway. Actual planning began in early 2002.

the majority of funds were dedicated to bus procurement and station construction. Only very limited funds were available for planning the busway, developing a business plan, creating a reasonable legal and institutional structure, or promoting and explaining the project to the public.

The initial BRT design looked superficially like Curitiba (the stations were initially direct copies) but the infrastructure and bus designs were not based on solid demand projections, and little attention was paid to developing the necessary institutional, operational, and regulatory structures. Sixty medium-sized Euro I diesel buses were iden-

Because few bus passengers are starting or ending their trip along Jakarta's planned busway, a trunk and feeder system will not work well.



One proposal for the plaza at Kota Railway Station in Jakarta, the northern terminus of the busway

tified for procurement. They have fairly limited capacity (about 85 people maximum, compared to 165 on a TransMilenio bus), and boarding is cumbersome because there is only one door. Euro II and CNG – propelled vehicles were not initially considered because the delivery time of the manufacturers was too long, a decision that angered some environmentalists.

After participating in technical workshops in Bogotá and Quito, and receiving several leading BRT experts, the technical competence of Jakarta's staff to implement the project began improving. Recently, the chief assistant to the city secretary, Irzal Jamal, was made the head of the busway project, and project coordination has improved, though his authority over the various city agencies remains insufficient. The busway plans are also now better integrated into Jakarta's regional transportation plan, that was being developed by BAPPENAS (the national planning agency) with support from JICA (Japanese International Cooperation Agency). The newer plan, developed by the University of Indonesia at the Governor's request, named 15 possible bus priority corridors, including the Sudirman/Thamrin corridor.

As ST went to press, one major problem with the Jakarta busway remained unresolved. The north-south Sudirman/Thamrin corridor primarily connects the wealthy southern suburbs to the central business district. Most of these trips are made by taxis, car, or motorcycle. While the corridor carries about 16,000 public transit passengers per direction per hour during rush hour, only one in five bus passengers gets either on or off in the corridor. The rest are just passing through. This means that if the busway is designed like a sep-

arate, closed metro-like system, most people will have to transfer once or even twice to use the busway.

Prior to the arrival of busway experts Paulo Custodio and Pedro Szasz, the plan had been to shut down the seven bus lines that currently travel the full length of the corridor, and replace them with 60 new buses that would operate only in the busway. All the other existing bus lines would continue to operate in the mixed traffic lanes.

This plan has several problems. The private bus companies do not want to give up even these lines. Furthermore, if only the passengers currently using those seven lines switch to the new busway, and the others stay on their current routes, the busway would only carry some 1400 passengers. This is less than 1/10 of the total transit passengers in the corridor, and less than the roughly 4000 passengers per hour that are currently using the mixed traffic lanes. Even if the new busway attracts a lot of new riders, and operates at maximum capacity, these buses can only handle 3200 passengers – still less than a mixed traffic lane. Either way, motorists and regular bus passengers already stuck in bad traffic will find themselves in gridlock, looking over at a relatively empty busway, and cursing.

The solution preferred by Custodio and Szasz is to allow most of the existing bus routes to operate inside the busway. This would allow all of the buses currently in the mixed traffic lanes to be moved into the bus lane. As a result, the congestion in the mixed traffic lanes would go way down, and motorists would be thrilled. Meanwhile, bus service would also improve. Furthermore, rather than setting up a new service that competes with existing

bus lines, all of the existing bus operators would benefit from the new system. This is the classic 'win-win' scenario that everyone is hoping for.

For this to work, however, some 200 buses would have to be purchased or retrofit to operate both on and off the busway corridor, ie. with doors on both sides. While the private bus operators generally support this proposal, they would need financing for the new buses. In other words, the funds currently intended for direct procurement of 60 new buses by the government would have to be redirected to partial financing of 200 buses to be owned and operated by private bus companies.

In this way, Jakarta would have a BRT system that improves overall traffic flow in the corridor and provides enhanced bus service without burdening existing bus passengers. This success would provide the public support for future expansion of the system. Until now, however, this option had not been accepted.

Cape Town, South Africa

Cape Town is planning its Bus Rapid Transit project around a vision of social equity, creating the foundation for tenable post-apartheid urban design. The city has chosen to construct one pilot corridor, a 32-km busway with accom-

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panying bicycle and pedestrian space. The corridor will run along Klipfontein Road, which spans poor black townships, "coloured" (mixed race) areas, and the predominantly white inner city suburb of Mowbray. Local leaders see the project as a way to bring together communities broken apart by Apartheid. The Transport and Public Works recently approved an \$11 million budget for planning and construction, funded from both city and provincial authorities.

Cape Town's current public transport system is clearly not up to the task of serving the 50% increase in transport demand projected over the next twelve years. Deteriorating rail and inefficient bus services are losing passengers to automobiles and informal mini-bus taxis while draining \$65 million in annual operating subsidies.

Some critics of the planned BRT system favor modernizing Cape Town's antiquated commuter rail line. However, the line poorly serves many of the newer settlements. Furthermore, the cost of reconstruction would require doubling the current \$38 million annual capital subsidy, and continuing the \$30 million in annual operating subsidies. Given other pressing housing and sanitation needs, self-financing BRT is an attractive alternative.

As in other cities, however, there is not yet a fully developed network plan in place. Whether BRT will replace or be integrated with the deteriorating rail line in the corridor has also not been resolved. Nor is it clear what role Cape Town's existing bus system and its powerful mini-bus taxi industry will play in the new corridor. When the city announced its plans for the new system without a clear vision for integrating existing operators, the bus unions were among BRT's most vocal critics.

Nevertheless, political commitment is strong, and there is a good chance that Cape Town will become Africa's first BRT system. Cape Town has also officially acknowledged that the pilot BRT is the centerpiece for a larger strategy to improve quality of life in

The Klipfontein bus corridor will tie together areas broken apart by apartheid.



*Klipfontein Road:
Africa's first BRT corridor?*

Cape Town, which includes high-quality public spaces connected by extensive state-of-the-art cycling and pedestrian facilities.

Dakar, Senegal

Dakar, Senegal's 2 million people are concentrated on a narrow peninsula. Each day, many of them must reach Plateau, the slightly elevated central business district at the tip of the peninsula. With hundreds of used cars pouring onto Dakar from Europe every week, Dakar's one highway, the Autoroute, is a several kilometer-long

parking lot every morning, creating a captive market for street hawkers. A rail line exists, but it serves only 22,000 passengers per day (1% of the trips), is badly dilapidated, and it passes mainly through industrial areas, far from rapidly growing residential areas. Dakar's quasi-public transit company, Demdik, which took over SOTRAC, the old public authority, is looking for private investors, but it currently only has 85 functioning buses. Meanwhile, the vast majority of the public transit trips are handled by two forms of paratransit vehicles. There are some 3000 or more 18-seater Car Rapides, modified Renault trucks imported in the mid-1970s, and a similar number of 30 – 40 seater Ndiaga Ndiayes, using modified Mercedes trucks.

Dakar is thus a prime candidate for a high capacity busway system connecting the rapidly growing residential areas of Pikine and Guedawaye to Plateau, (the CBD.)

Busway plans in Dakar are still at a very early stage. After workshops in Dakar with Enrique Peñalosa and other experts in January of 2003, the International Seminar on Human Mobility in Bogotá in February, and a visit to the busway in Rouen, France, political commitment to BRT in Dakar was reasonably strong. Dakar asked for ITDP's help in securing a UNDP GEF grant to help them develop a concrete BRT system plan. The Ministry of Transport identified CETUD, the public transit authority for Dakar, as the project's implementing agency. However, possible tramway projects, new BOT toll roads, new airports, hydrofoils, upgraded rail lines, and other measures, are also competing for attention and funds.

The BRT project will be integrated into ongoing efforts by CETUD under the World Bank's Urban Mobility Project. The loan is to develop a master transportation plan, modernize the fleet of paratransit vehicles, and reconstruct two major intersections, but progress has been slow. While the original project mentioned the possibility of extending an existing busway (actually open to paratransit and taxis also), no

funds were actually allocated for this purpose, and the lanes little resemble a BRT system.

The national government is also keen to get local bus assembly started, and has donated railway land and buildings to SenBus to start a small bus assembly plant. SenBus is a local initia-

advantage of Ghana's highly subsidized prices, threatened to collapse the country's banking sector. Now, the NPP is hoping that drastic public transport improvements will ease the political pain it suffered when fuel prices doubled at the pump.

To date, the government's primary

some of the necessary data collection for the BRT plans.

The city faces challenges. Many powerful civil servants, who are still receiving subsidized fuel, favor road building over public transit. Accra also has a powerful association of minibuses owners whose interests will have to be considered.

Dar es Salaam, Tanzania

Political commitment to plan a BRT system in Dar es Salaam is strong, and a priority of the Mayor. The Dar es Salaam City Council stated its commitment to the project in an official Council session in May. The Ministry of Communications and Transport presented the BRT proposal to the National Parliament, which endorsed the project, and it is now included in the National Urban Public Transport Policy. The technical details, however, have yet to be sorted out.

In May 2003 ITDP sent a preliminary team to Tanzania, consisting of the Deputy Director of TransMilenio, ITDP staff, McKinsey & Company, and the Interface for Cycling Expertise (I-CE). The workshop was hosted by the Association for the Advancement of Low Cost Mobility and the Dar es Salaam City Council. In June the City Council formed an initial team to begin the BRT planning process, led by a member of the City Council. This core team has since conducted some initial surveys, produced a 'vision' statement of the BRT and its main objectives and rationale, and prepared an approximate time frame for the implementation of BRT, and an outline of the initial trunk and feeder network.

Technical support for the Dar es Salaam project is included in a Global Environment Facility Medium-Sized Project Brief currently being reviewed by UNEP. The Dar es Salaam City Council has stated a commitment to allocating US\$300,000 toward BRT planning in their budget for 2004, and various other sources of funding have been identified. I-CE have stated that they will support aspects of non-motorised transport integration with the BRT plans. ♦



A shared bus-minibus-taxi lane in Dakar

tive by Prestige Group, using small buses manufactured by Tata of India. These buses are designed roughly to fit the requirements for the paratransit modernization element of the World Bank loan, but it is not yet clear whether these high floor (80 cm) minibuses built on truck-chassis with non-Euro II compliant Tata-Telco engines will match the technical specifications required by the World Bank.

In September, ITDP's Executive Director and consultant Xavier Godard initiated the BRT planning process in cooperation with CETUD, the Municipality of Dakar, and the Ministry of Transport. A preliminary concept will be presented at a stakeholder meeting later this year.

Accra, Ghana

Last January, Ghana's ruling New Patriotic Party (NPP) abruptly ended years of subsidy to the state-owned oil refinery. A \$550 million debt, coupled with fuel smuggling operations taking

public transportation improvement measures have consisted of procuring 147 new and used buses, now stuck in congestion, and painted bus lanes on a few major arterials which are still clogged with private cars. Now, however, there are signs that the national government and the City of Accra are taking the necessary steps to build a true Bus Rapid Transit system.

Encouraged by a January visit to Ghana by Enrique Peñalosa, Minister of Transport Richard Anane sent a high-level delegation, including the Deputy Minister of Transport Hon. Agyeman-Manu, to Bogotá for ITDP's International Seminar on Human Mobility. Their positive impressions of TransMilenio led to the creation of the Joint Committee on Public Transport. Pending United Nations Global Environmental Facility (GEF) support for Accra's first BRT line has led the Joint Committee to suggest that the terms of reference under a World Bank-funded transport planning study include

Transit Terror

The view from Jerusalem

by Yaakov Garb

Initial reports show that Israel's public transport system has lost up to one third of its ridership in just two years. During the most recent Intifadah (uprising) in Palestine, an average of almost one successful transit terror attack a month has pummeled the bus system, and people are avoiding buses, trains, and public places. This recent loss exacerbated previous decades of ridership loss (due to earlier bouts of terror, and the ongoing rise in private car use), during which almost everyone who could avoid bus travel had already done so.

While Israeli bus bombings are an exception, or at least a limited case, transit advocates should be aware of this possible new factor in the ridership equation. In the U.S., at least, the transit community is taking things quite seriously post-September 11, with numerous new studies and reports on the vulnerability of transit to terror (see references at end of article). Without indulging in fear mongering, or hitchhiking on the trendiness of security awareness and technologies, it is worth looking at the responses of one

country's transit system to extreme exposure to terror.

Transit as a Preferred Terror Target

Transit (which in Israel means predominantly bus transit) has long been a primary target for terror in Israel. Indeed, for periods, bus bombings were synonymous with terror. They changed and continue to change the region's history.

In April of 1994 there was an attack on a bus in Afula, then in October, 1994, a Hamas suicide bomber bombed a bus in Tel Aviv killing over 20 people, and a spate of bus bombings followed in 1995. Their political effect was enormous. In the opinion of Ehud Sprinzak, an expert on right-wing extremism:

"Terror was the major factor in radicalizing the opposition [to the Oslo Agreement and Rabin] – not the issue of the Land of Israel or the settlements. . . It was the bus bombings that raised the public's blood pressure so high, that put hundreds of thousands of protesters into the street, and that fostered the

rage, hatred and desperation that culminated in Rabin's murder."

In February of 1996 – a few months before elections between Peres and his right-wing Likud challenger, Netanyahu – another spate of attacks began. It dropped Peres' lead from 15 to 3 points almost overnight. Predictably, these attacks featured prominently in a series of Netanyahu's Likud election advertisements. Peres' loss a couple of weeks later by a narrow margin was commonly seen as the outcome of the bus bombings, with informed commentators arguing that they "destroyed the Labor government and the peace process, such as it was, and contributed substantially to Netanyahu's election."

Bus bombings are also a staple of terror in the second Intifadah that began in September of 2000. About thirty of the attacks on civilians in Israel proper have involved buses, with many more attempted attacks prevented. This averages almost one successful attack a month on buses over the last years, in a country with fewer inhabitants than New York.



Why is transit such a target? In an earlier period, say 10 or 15 years ago, one could say that public transport was the heart of everyday life. If terror aims to make people feel vulnerable, to say to themselves “that could have been me,” then when a substantial majority of travel was on buses, transit was almost an obligatory passing place for most people. Today, however, with a modal split less than 50%, a bus bombing no longer hits so directly at the daily life of “everyman,” and other targets, such as malls or restaurants feature as prominently.

Yet, buses remain an attractive target for terror. They can be conceived as closely packed packages of people moving through a landscape offering multiple unprotected approach points. While major urban stations are mostly now sealed and guarded, the number of open-access and unguarded secondary stations and minor stops is very large and spread out in a variety of settings, within and between cities.

Israel has done a lot to reduce the vulnerability of buses. Special uniformed and undercover security agents roam on buses, drivers have undergone training in identifying suspicious activity, and there are now frequent driver checks of the bus and luggage compartment. Public awareness is hugely heightened—passengers are jumpy, constantly eyeing one another. Everything and everyone that comes into the larger municipal bus stations is now inspected. In fact, security concerns were an important guiding principle in the design of the new Jerusalem central bus station. However, buses are still vulnerable to ambushes while traveling, and to suicide bombers, whose “smart” and agile delivery, remain a major threat.

While there have been three attacks on rail, the number of stations is far smaller, and unlike buses, train stops have limited access. It is more difficult, however, to safeguard the seven hun-

dred kilometers of tracks, and two other attacks on rail, which thankfully left no serious injuries, were in the form of explosive devices alongside tracks near Gan Michael in May of 2001, and near Lod in July of the same year.

The Rail Authority now has a securi-

fencing for track running along the Green Line and closed-circuit cameras.

The Impacts

The early bus bombings led to sharp ridership drops in the days following an attack, with a gradual rebound – but

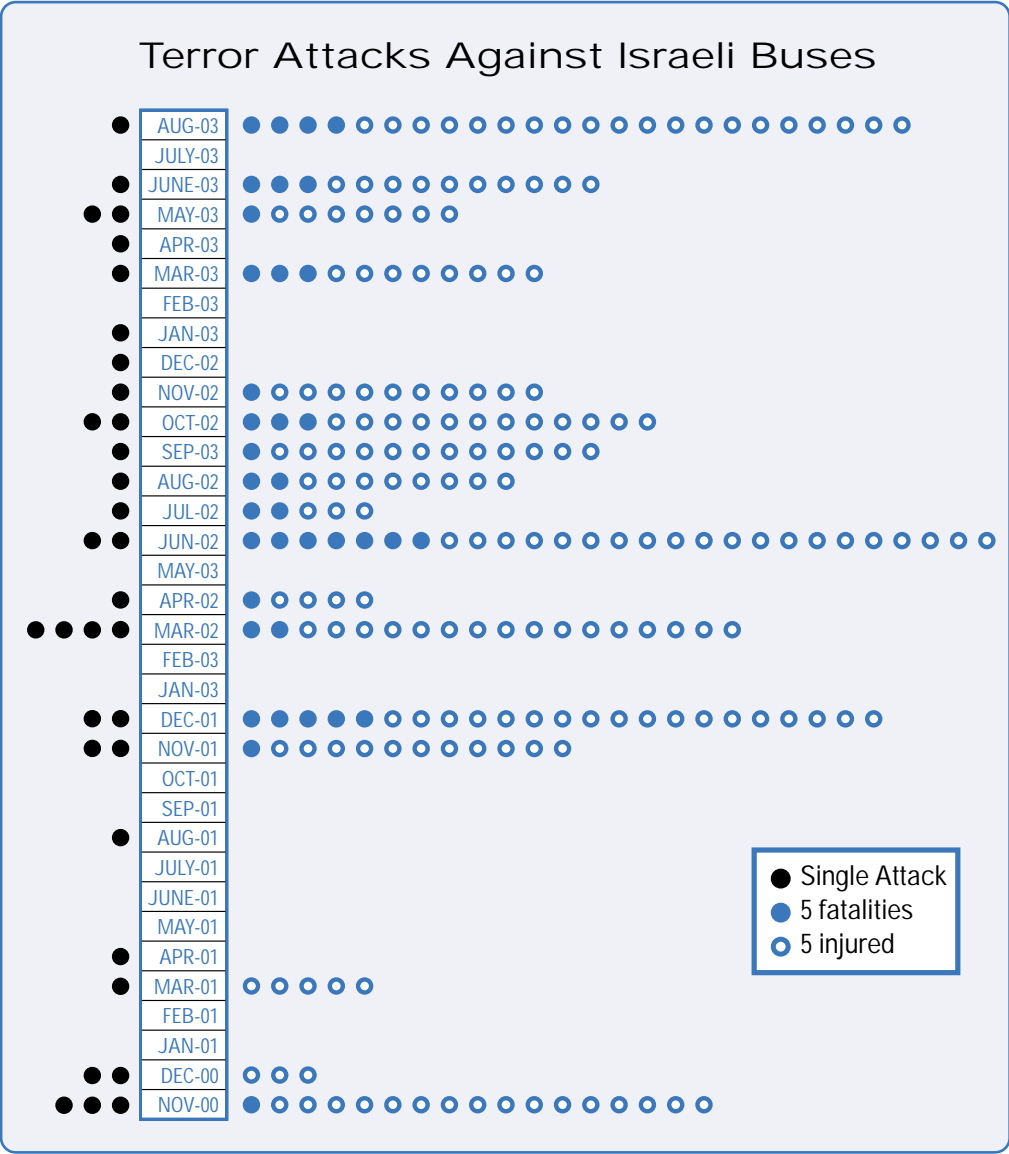


Diagram derived from the terror database of the International Policy Institute for Counter-Terrorism; includes attacks on Israeli buses in Israel and the Occupied Territories.

ty unit under its supervision that is responsible for security in stations, in the carriages, and along the rail line, through a lead train with sensors for suspicious objects. Similar sensors are planned for installation in regular trains. Additional measures include

never quite to former levels. Thus, over time, terror accelerated the gradual attrition from public transport, which has been ongoing at the rate of a few percent a year. Anecdotally, the terror

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Sao Paulo's Bus Reform Leads to Turmoil

Sao Paulo, despite being only an hour by plane from the world-famous Curitiba Bus Rapid Transit system, has a chaotic, deteriorating, and poorly integrated bus system that is hemorrhaging passengers. Now, Sao Paulo is trying to rationalize the transit system and re-assert regulatory power over its huge private bus companies, but the reform has twice led to paralyzing violent strikes. Caught in the middle are the city's 8 million daily bus passengers.

by Aaron Golub
and Walter Hook

Background to the Turmoil

Car ownership in São Paulo has been rising rapidly for the past 20 years. Since 1987, a million new cars were added to Sao Paulo's streets. With 2.5 people per car, central Sao Paulo has car ownership levels similar to much richer European cities. The result has been terrible congestion and pollution. Stuck in traffic, bus fleet operators in central areas use 7% more buses just to handle half of the number of passengers they had a decade ago. Faced with higher operating costs, bus fleet operators successfully lobbied to increase their fares, alienating more passengers.

While Sao Paulo's buses are privately owned and operated, they are fairly tightly regulated. SP Trans, the municipal transit authority, contracts operations in each region to private companies, then assigns specific schedules and routes. The private operators are large companies, which only recently started signing concession contracts that last ten years. Because SP Trans required operators to provide service on routes that were not profitable, and obligated them to provide free services to the elderly the disabled, plus half-price tickets to school children, SP Trans paid them a subsidy. Until the mid-1990s, the bus operators' subsidy was paid on a per kilometer basis. This created an incentive for bus operators to have long bus routes, regardless of the number of passengers they carried. Despite declining ridership and worsening congestion, subsidizing routes per-kilometer maintained a consistent level of service even to remote locations, but at an ever-growing cost to the taxpayers. At one point, 30% of the bus companies' costs were being covered by the subsidy.

In the mid-1990s, when Brazil began a set of economic liberalization measures, Sao Paulo began paying private bus companies on a per-passenger basis, rather than per kilometer. Being paid per passenger, the bus companies lobbied to cut back on the number of trips they made, particularly on less popular routes. They also lobbied for fare increases. Over time, budget deficits were reduced, but services were cut backs and fares increased.

Around the same time, large state enterprises were broken up and privatized, including CMTC, the municipal transit operator. Many people were thrown out of work with a one-time severance package. With this money, a lot of people bought minivans and became informal sector minibus operators, or 'clandestinos'. These clandestinos began to successfully compete for bus passengers, mainly because their service was much more frequent. As the bus companies lost more and more passengers to the clandestinos, their profits and their subsidies both declined.

With declining profitability, companies owning operating concessions have been slowly moving their money elsewhere. What used to be a sector of expansion, investment, even overcapitalization, has turned into one of stagnation and disinvestment. With disinvestment has come declining service levels, breakdowns,



lower photo: Lee Schipper

more accidents, higher emissions levels, customer dissatisfaction and a bus fleet whose average age has crept up from three to seven years: in short, the familiar downward spiral in transit service.

Sao Paulo's Experiments with Busways

Bus priority measures are one good solution to these familiar problems. Sao Paulo has a hodgepodge of poorly integrated dedicated bus lanes. If not the world's best, Sao Paulo's busways are the world's most diverse. There are busways with high platforms and low platforms, busways with the stations on the right side and the left side, bus stations with and without passing lanes, busways using electric trolleybus and diesel, even an elevated skybus.

Because these bus lanes do not form an integrated network, they were designed to be 'open' – different bus operators can enter and leave the busway anywhere along the route. As such, the stations had to be designed for a wide variety of bus types. This made it impossible for these busways to reach the sort of high capacity levels and high commercial speeds that Bogotá's TransMilenio has achieved. Because these busways serve an increasingly aging trolleybus and bus fleet, there are frequent breakdowns that clog the entire busway. Private operators then break out of the busway, damaging the system's concrete dividers and frequently the buses as well. To make matters worse, these busways and bus lines are poorly integrated with the three lines of the Sao Paulo metro and commuter rail lines.

In addition, with declining passengers and the decentralization of jobs out of the city center, many existing bus routes no longer make economic sense. Prior to the recent restructuring, operators controlled bus lines from a particular zone of the city to downtown. As these lines converged on the city center, more and more of them operated on the same arterials. This system worked fine when almost all the trips went to the city center. As jobs gradually decentralized, however, many buses were running half empty as they approached the downtown.

A Dramatic Bus System Rationalization Plan

In this context, SP Trans developed a dramatic rationalization plan. This plan extends and upgrades several exclusive busways to form something of an integrated network, and provide links between the busways and the metro and commuter rail system. All of the city's bus routes will be redrawn, creating a trunk and feeder system.

One benefit of the old system was that 85% of passengers were able to make their entire trip without transferring. In the new system, people will have to make two and even three

transfers to make the same trip. To make these transfers as quick and convenient as possible, over 40 new bus terminals are planned throughout the city. "Smart card" fare collection technology will also be implemented to allow for free transfers between local routes and structural routes. For buses running in mixed traffic, a program of partitioning off lanes with inexpensive barriers, signal prioritization, and pedestrian and bus stop improvements will help operations and service levels. The plan also includes the development of greater systems of accountability for the private bus operators, with new local review boards to handle complaints.

To implement these changes, the Municipality has to re-

negotiate the concession contracts with all of the private bus operators. As the new system should be much more efficient, the lines should be more profitable than before. Hence, the Municipality is also demanding that the new concessionaires share the investment burden. It wanted the bus companies to invest in new buses,

new ticketing systems, and to pay for the new bus terminals. The new system, however, will also cause layoffs, running afoul of the unions.

The View of the Private Bus Operators

The private bus companies are not opposed to many elements of this plan, according to Carlos Henrique R. Carvalho, an expert from the Associacao Nacional das Empresas de Transportes Urbanos, the national association of bus owners. During an interview with ITDP in April 2003, Mr. Carvalho said that the private companies recognize that they are losing passengers, and know that something needs to be done. They enthusiastically support the expansion of the busways, but they point out that SP Trans is currently heavily in debt, so they doubt the exclusive busways will be upgraded or extended any time soon.

Meanwhile, new investments by the city, the state, and the national government continue to prioritize the Sao Paulo Metro instead of the critical bus system reforms. With \$2 billion in investments from the national government already under its belt, the State of Sao Paulo continues to invest heavily into the 4th Metro line, despite its \$100 million/km price tag (compared to \$5 million/km for the bus corridor). The Sao Paulo Metro also has money from BNDES (a state bank), the Inter-American Development Bank, and the World Bank. None of these institutions have invested in Sao



Buses on Ave. Paulista in Sao Paulo

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Sao Paulo's new hub and spoke bus routes will be more efficient but passengers will have to transfer and nearly 10,000 workers will lose their jobs.

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Paulo's more critical busway improvements, though BNDES and IDB have committed to do so.

The bus companies say they are willing to operate the bus lines with no subsidy if they do not have to carry the elderly and the disabled for free. Companies resent the fact that their



Sao Paulo's Sta. Amaru bus corridor is plagued with vehicle breakdowns and bad maintenance.

subsidies are being cut, and they are being asked to make huge investments into rolling stock, when it is clear that the vast majority of the transportation budget of the City, the State of Sao Paulo, and the national government are going to fabulously expensive Metro systems.

Some transport experts contend that the bus companies are concerned about the new bus stations because they do not want a fare system that offers free transfers.

The Conflict

Conflict between the city and the operators has remained acute. Before SP Trans and the private operators could agree on new terms, their old contracts expired, forcing the signing of "emergency" contracts. During 2002, the city gave up on the demand that the bus companies build the new bus terminals, but continued to insist on new buses and ticketing systems, while bus operators claimed they didn't have the money for the investments. SP Trans and the operators blamed each other for delays.

Late in 2002, SP Trans and the city government removed one or two companies from operation for not signing or violating the new contracts, and in early 2003 nine more companies were removed for varying reasons. The companies claim the move was political, but according to SP Trans, it was because of contractual issues. A major point of contention over the actions was the nearly 10,000 workers who were to be laid off. SP Trans offered some solutions to the problem, but they would not satisfy the large need for jobs. This prompted a brutal system-wide strike. While on the front lines of the strike was the bus drivers' union, it was later revealed that several of the strike leaders were being bribed by private operators. The strikes led to violence. Several labor leaders were jailed, and other firms are being

investigated for fraud.

While Sao Paulo has 'regularized' some 8000 of its clandestinos, the thousands of others who are operating informally have been excluded from the bidding process for the local minibus feeder services, which has also prompted frequent protests over the past year.

Conclusions

While the Municipality's restructuring plans will improve efficiency, it still remains unclear who will pay for extending and integrating the busways. Most experts feel re-allocation of the Sao Paulo metro funds is unlikely, if for no other reason than that the State Government and the City Government are under different political parties. Completion of the 4th Metro line remains popular even with most transport experts. While 25% of the national government's gas tax revenue is supposed to be earmarked for urban public transport, an agreement with the IMF currently is forcing this money to be used for debt relief.

One possible solution would be to implement some sort of congestion pricing scheme along the lines of London's new system, and use the revenues to expand the busway system.

This would allow Sao Paulo to upgrade its busways to a fully closed, TransMilenio or Curitiba-style trunk and feeder busway system, while promoting improved bicycling and pedestrian facilities. For this reason, ITDP is sending both Derek Turner, (the leading technical expert on



A pre-paid bus terminal in the State of Sao Paulo

London's new congestion pricing system) and Enrique Peñalosa, the former Mayor of Bogotá, to speak at the national gathering of public transit operators (ANTP) in Vitoria, Brasil, in October, and to meet with senior officials in Sao Paulo, Rio, and Brasilia.

For now, Sao Paulo's transit system remains a patchwork of new routes and services using old buses, clandestine operators and remaining bus firms seeking to ride the storm out in hopes of some order soon to come. Optimistically, however, amidst the struggle, strikes, bribes and burning buses, there seems to be positive movement towards the new system which has potential to stem the tide of informal operators, improve service conditions for users and to create a more profitable and efficient system for operators. ♦

Transit Terror

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attacks were a spur for families to purchase their first or second cars. And the trends in Israel are striking: someone who has a car available leaves the public transport system completely and permanently – research shows that a very small percentage of transit passengers now own a car.

The fact that ridership of public transport is now increasingly captive means that those at society's margins are more exposed. An initial analysis shows that the elderly, the young, and foreign workers are quite disproportionately represented in the casualties. In fact, one finds barely a handful of employed men between the ages of 25 and 50 among the more than one hundred people killed in the last three years.

These constant attacks already cast a shadow on future projects. For example, should the depressed ridership rates be assumed stable enough to be used in the cost-benefit analyses of feasibility studies done for future projects: the light rail projects in Jerusalem and Tel Aviv, for example, or the proposed inter-urban rail connection between Jerusalem and Tel Aviv? This would lower the viability of these projects.

In addition, terror has made transit more costly. The Ministry of Transport recently approved an almost 2 million dollar addition to the Rail Authority budget specifically for security, and bus security also demands large amounts. Some of these will eventually get passed on to passengers, and may also make support of public transport even less palatable to decision-makers.

The vulnerability of transit now figures into other planning discussions. Bus systems would be less vulnerable to long-term disruption, as they can be rerouted, unlike a track system. But bus stops tend to be more numerous and open (and thus vulnerable) than rail stops, at least in the Israeli context. New contracts now must have substantial clauses covering the various contingencies of terror attacks and service stoppages.

Some claim that because of the

renewed Intifadah, several bidders on a transit BOT ("build, operate, transfer") project in Israel withdrew because of indications from Arab countries that a project in Jerusalem would compromise their chances for projects in Arab countries. The reduced number of bidders may reduce Israel's bargaining power, and decrease value for money.

The political turmoil has also changed routing. The Jerusalem Light Rail's first line was planned in more hopeful times to pass alongside the Arab neighborhoods of Shuafat and Bet Hannina. After the recent Intifadah, public perceptions have changed to the

Finally, the rail project was part of an urban revitalization package, now made far less convincing since downtown Jerusalem has been gutted by fears of terror.

In addition to affecting specific projects, some speculate that the terror in Israel could have a more subtle effect; that the fear of terror has emptied downtown Jerusalem, and over time urban morphology (and transport infrastructure to serve it) will come to reflect the shift of social and economic life elsewhere. Finally, terror may have its major impact on sustainable development through political turmoil's sim-

Most victims of the bus bombings are too poor, too old, or too young to own a car. Many are foreign workers.

point where threats of an attack could be a deterrent for many passengers.

Indeed, the issue of routing of the line into Arab East Jerusalem is a very politicized discussion. The Right advocate it as an important statement of Israel's permanent sovereignty over these areas, while the Left complains about investing in infrastructure in what will ultimately become Palestine.

ple distraction and preemption of other social, economic, and political agendas. As transport systems and urban life in Europe undergoes gradual improvements and integration, these issues often get sidelined in Israel, which should have been on a similar trajectory. The country will pay the price of these lost years in its quality of life and competitiveness for years to come. ♦

Sites and resources:

A recently published OECD publication on transit terror is available at:
<http://www.oecdwash.org/PUBS/BOOKS/RP033/rp033trn.htm>.

The Counter-Terrorism Training Coordination Working Group convened by the U.S. Department of Justice's (DOJ's) Office of Justice Programs has a site on Surface Transportation Security at:
<http://www.counterterrorismtraining.gov/pubs/surf.html>

The U.S. Transportation Research Board has a resource page on Transportation System Security at:
<http://ssl.csg.org/terrorism/Transportation%20Security.htm>
and a summary of various activities at:
http://gulliver.trb.org/publications/dva/TRB_Security_Activities_Summary8-03.ppt

The Transit Cooperative Research Program has a several full text PDF report available, including: "Emergency Preparedness for Transit Counter Terrorism" at: http://gulliver.trb.org/publications/tcrp/tcrp_syn27.pdf and Public Transportation Security (Vol. 1) at: gulliver.trb.org/publications/tcrp/tcrp_rpt_86-v1.pdf.

ACCESS AFRICA UPDATE

by Paul Steely White

Enrique Peñalosa Tours Africa, Inspires Change

In January, ITDP organized a series of speaking engagements, press events, and workshops on sustainable urban transport throughout Africa. Featuring Enrique Peñalosa, former Mayor of Bogotá, Colombia, the tour made stops in Accra, Ghana; Dakar, Senegal; and Pretoria and Cape Town, South Africa.

Inspired by the story of Bogotá's transformation compellingly told by former Mayor Peñalosa, Africa's leading politicians have redoubled their efforts to raise transit ridership, curb rising automobile use and create a more people-centered urban environment. The tour's many



*Enrique Peñalosa in Dakar:
African leaders are building upon Bogotá's successes.*

events attracted some of Africa's influential politicians, including Senegal's President Abdoulaye Wade, Ghana's Transport Minister Richard Anane, and Western Cape Minister of Transport Tasneem Essop.

"In Bogotá, we chose to build a city for people, not for automobiles," said Mr. Peñalosa. "Cities built for cars' mobility suffer from congestion and unsafe street conditions and leave many residents with poor access to jobs. Instead of these problems, we gave our citizens enjoyable public spaces and unprecedented mobility."

The tour yielded some significant advances. Bus Rapid Transit systems are now being planned in three out of the four cities he visited (see story, page 4). Accra's Mayor Solomon Darko has committed to improving the city's bicycle master plan, and has since officiated at two successful bicycle caravan events. And, most

dramatically, Cape Town has undertaken a new five-year mobility strategy predicated on a city-wide system of BRT corridors and attendant pedestrian paths and cycleways. Cape Town's second Bogotá-inspired Car Free Day is set for November 30.

Public Rides Raise Image of Cycling

As part of a campaign to boost cycling in Ghana's capital city, in January ITDP organized Accra's first public bicycle ride. Called the "Accra Bicycle Caravan," the ride attracted 300 cyclists. The second event, thanks in large part to support from local bicycle retailers, community leaders, and Cowbell Milk, saw over 2,000 participants. More than just a fun way to raise public awareness, the rides featured pro-bike speeches by leading politicians and community leaders, bicycle giveaways and training in safe riding techniques and basic bicycle maintenance.

Accra Mayor Solomon Darko, who since taking office in 2000 has been one of Africa's loudest voices for cycling and public transit, officiated at the opening of both rides.

"It is my desire to see cycling carefully planned into our road network to make cycling safe in the City of Accra," said Mayor Darko, speaking at the commencement of the second caravan. "Almost every street in the Accra Metropolitan Area is loaded to capacity with cars. People are forced to sit in traffic for hours at a time on their way to and from work everyday. If we do not look at other alternative means of transportation, traffic will keep getting worse in Accra."

Cowbell Milk was so satisfied by the success of the event that they have committed to holding two caravans each year in Accra and are already expanding the



*Mayor Solomon Darko
celebrated cycling at both
Accra Bicycle Caravans*

rides to other cities across Africa. Cowbell has also created an employee purchase plan to help its employees buy new bicycles from the company through interest-free monthly payments.

Model Urban Bicycle Gives Indigenous Dealers a Fighting Chance

Previous ITDP efforts to commercialize a quality yet low cost modern bicycle met with some success, delivering approximately 700 new one-speed mountain bikes to Senegal and South Africa. Without the backing of first-tier bicycle companies, however, the project failed to deliver sufficient value to retailers and consumers. Then, in late 2002, Trek Bicycle Corporation joined the effort, aiming to design the world's first low cost bicycle that in the words of John Burke, Trek's President, is also, "durable, user-friendly, and attractive."

In addition to donating Trek's design and branding expertise, Burke convinced other leading companies, including SRAM and Giant China, to contribute at-cost product and services to develop and manufacture the bicycle. The bike's signal yellow color was chosen to ensure that the bike will be visible at night. Quality components, a derailleur protector,



fully encased cables, thorn-proof tubes and other features were added help increase the bike's durability.

Dubbed the "California Bike" the first 2,000 units of the bicycle landed in South Africa, Senegal, and Ghana in August, and are now are being sold exclusively through the California Bike Cooperative (CBC), a pan-African collective of indigenous local bike dealers sharing a commitment to bicycle advocacy. They also share a common frustration, as historically they have not wielded sufficient buying power to



Worcester, SOUTH AFRICA – With her bicycle, hospice worker Wamhemina Fuwer visits 19 patients per day when she used to only visit 8. What's more, Ms. Fuwer gives better quality health care, "because I am not as tired from walking to them," and makes more money, as she is paid per hour she spends with her patients, most of whom are suffering from HIV/AIDS.

negotiate terms with suppliers, ensure good quality, invest in advertising and marketing events, or to affect government transport and trade policy. What's more, indigenous bike dealers are now increasingly threatened by encroaching big-box retailers. Early sales figures and successful promotional events indicate that CBC dealers – thanks to their newly combined purchasing and organizational muscle – are growing their businesses. Their flagship product, the California Bike, is proving a tremendous value for consumers and is selling briskly.

With funding from US AID, Alternative Gifts International, and ITDP members, CBC dealers and ITDP will distribute hundreds of bicycles to students, health care workers, and women's business collectives. For more information about this revolutionary new bicycle, visit www.californiabike.com. ❖

Iraqi Oil

and the Future of OPEC

by Lane Wyden

Though the Bush and Blair Administrations have both denied any connection between the Iraq war and oil, many people suspect a link. No weapons of mass destruction have turned up. Nuclear materials supposedly being shipped from Africa to Iraq now turn out to be false rumors. Links between Iraq and Al Queda terrorists are unlikely.

The Bush family has long been involved in the oil business. Vice President Dick Cheney was the former CEO of Halliburton Oil. Secretary of the Army Thomas White was formerly with the failed energy giant Enron. Secretary of Commerce Don Evans was an executive at Tom Brown, an oil exploration firm.

The US is consuming 20 million barrels of oil a day, about 25% of global oil consumption. While Iraq only produces some 3.3% of world oil supplies, it holds 11% of known oil reserves. The cost of oil production in Iraq is one of the lowest in the world. Cheney's high-level review of energy policy in 2001, dominated by oil interests, called for making "energy security a priority of our trade and foreign policy. It pointed out that:

"On our present course, America twenty years from now will import nearly two out of every three barrels of oil – a condition of increased dependency on foreign powers that do not always have America's interests at heart."

Rumsfeld, as Defense Secretary to Gerald Ford, remembers well the Arab Oil Embargo that the Organization of Oil Exporting Countries (OPEC) imposed on the US in retaliation for US support of Israel during the Yom Kippur War.

While we may never know for sure what complex motives fueled the war's planners, it is certain that undermining the political and economic power of OPEC was very much on their minds.

Oil Revenues and Who Controls Them

While the US now directly controls Iraqi oil revenues, this is beside the point. Iraq is currently importing oil, and near-term revenues are unlikely to cover much more than the reconstruction of the oil industry itself.

In May, the Security Council passed a resolution stipulating that Iraqi oil revenues pass into a new Development Fund for Iraq. The US-led civilian Authority controls the Fund,

with nominal oversight from multilateral development agencies, but the money can only be used for meeting humanitarian needs, reconstruction, disarmament, and Iraqi civilian administration.

Revenues from the sale of Iraqi oil in 2003 are likely to be less than \$5 billion, less than half of what the Bush Administration had originally anticipated. While in the 1980s, Iraq was producing about 3.5 million barrels a day; today it is producing less than 1 million barrels per day.

With modern equipment and a stable political climate, most people believe Iraq could easily produce 6 million barrels a day, raising more than \$55 billion a year. But reconstruction will not be easy. There was limited new investment in Iraq's oil industry since it was nationalized in 1972, and even less since the first Iraq War. During the recent war, the oil industry was looted, and land around the oil wells was left littered with mines and unexploded shells. Since then, opposition forces have targeted oil infrastructure, most recently blowing up the pipeline to Ceyhan, Turkey. Oil workers are also being targeted, and many are afraid to report for work.

According to oil industry expert Daniel Yergin, it will cost \$5 billion or more in repairs and upgrades and take a minimum of two to three years just to get back to the output levels of 1990. To expand capacity another 50% will take another \$30 billion. Because 25% of all oil revenues is earmarked by a previous UN agreement for war reparations owed to Kuwait, most of Iraq's oil revenue will be spent just on its own reconstruction, for years to come.

Privatizing Iraq's oil industry to attract private investment has been discussed. In theory, long-term drilling contracts could be awarded to international oil companies. Normally, international firms are willing to invest in modernizing the infrastructure in exchange for 12% of the profits, leaving 88% for the country.

Leaving aside the political impact of a US – controlled regime selling Iraqi oil rights to a US company, no foreign investor is likely to be willing to invest in a country with no internationally recognized government and an unstable security environment. As Daniel Yergin points out,

"To attract foreign investment, Iraq will need to establish a stable investment climate—a major challenge in a country with no banking system, no national currency, and no petro-

leum law. Considering the scale of Iraq's problems, oil revenues will play an important role, but so will fundamental reform of what had been a socialist economy."

Even if the Authority does try to privatize the oil industry, Chinese and Russian firms have prior legal claims. Before the fall of Saddam, Iraq awarded \$57 billion in concession contracts to Russian and Chinese firms. While these contracts may not be honored, the risk of legal complications is high.

With privatization in the short term unlikely, Administrator Bremer mooted an idea, (initially proposed by Halliburton and Bechtel) to have the US Export-Import Bank sell oil-backed bonds to finance this reconstruction. This proposal drew fire from Iraqis, who fear it will give the US control not only over current oil revenues, but also over future oil revenues. They feel no such bonds should be issued until a democratically elected government is in place.

Iraq's Financial Needs

In the short term, then, it is unlikely that Iraqi oil revenues will cover much of Iraq's staggering financial needs. Claims against Iraq from Kuwait are likely to be upwards of \$275 billion. Another \$142 billion is owed to various foreign companies and governments. Other Arab governments are owed the most, but France, Russia, and China are also said to be heavily exposed. Addressing basic humanitarian needs is likely to cost \$30 billion a year for several years. Reconstruction of basic infrastructure is likely to cost an additional \$100 billion. On top of this are the costs of maintaining the US military and civilian authorities, and the Iraqi administration and security forces, running more than \$4 billion a month.

To cover these costs, the American-led Coalition Provisional Civilian Authority has about \$4 billion in domestic and international assets frozen from the previous Iraqi government. In addition, it has about \$4 billion from a previous US Congressional appropriation. The Bush Administration has now asked for an additional \$51 billion for continued military operations in Iraq, and \$20.3 billion for the civilian Authority. Of this \$5.1 billion will go to increasing domestic policing, \$5.7 to get the power back on, and \$3.7 billion to get water and sewers working. Oil revenues may net another \$1 - \$5 billion, depending on whether the infrastructure can be made secure.

In other words, Iraq will be left in shambles and facing a humanitarian crisis for years to come.

A War on OPEC?

In the longer term, however, if the country can be stabilized, the US doesn't need to take direct control of Iraqi oil to benefit from the war. Some speculate that the real aim all along was to destroy the economic and political power of OPEC.

OPEC controls world oil prices by imposing voluntary production quotas on its members. Because the Saudis control so much of the world's oil supply, they have the power to discipline OPEC members. In terms of long-term oil reserves, only one country comes close to the Saudis: Iraq.

Iraq has not participated in OPEC voluntary production quotas since the end of the first Iraq war. Since they were selling very little oil, this made no difference to international oil prices.

While Iraqis still hold the key posts in the Oil Ministry and state oil companies, they now operate under the control of the Authority. The senior advisor to the Oil Ministry, Gary Vogler, is a former Exxon-Mobil executive, and the chairman of the 'Advisory Board' is Philip Carroll, former CEO of Shell Oil. Carroll has said, "While there's no democratically elected government, you won't see any change in Iraq's status as a member of OPEC."

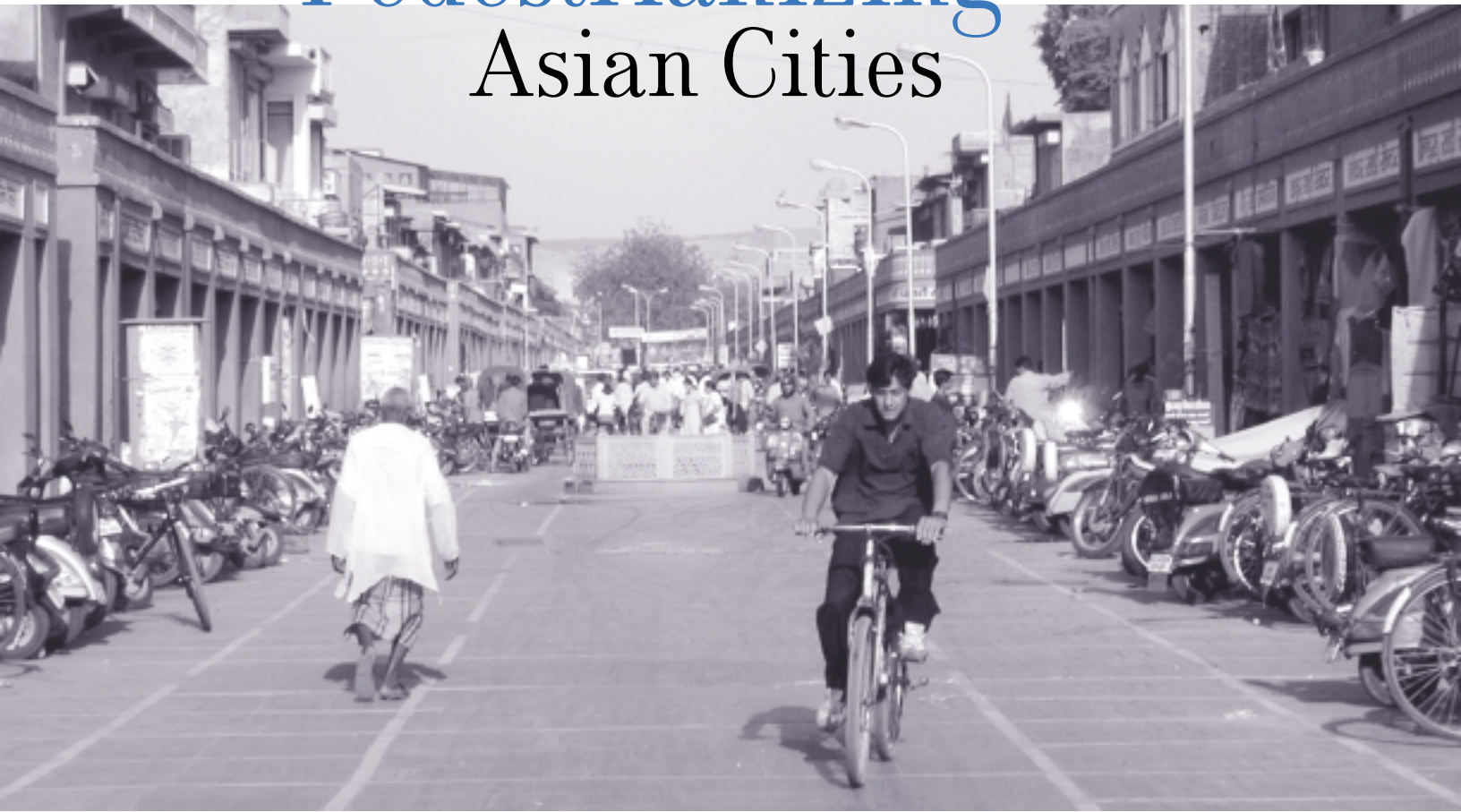
Since currently Iraq is not a party to any of the voluntary production quotas anyway, a change of status is not in fact necessary. It is likely that Iraq will remain a member of OPEC, and remain exempt from the organization's production quotas, for the foreseeable future. Given their enormous debts, even a 'democratically elected' Iraqi government will be under enormous pressure to pump as much oil as they possibly can as fast as they can.

Thus, the US does not need to directly control Iraqi oil. Once Iraqi production levels go up, international oil prices will come down. According to International Energy Agency data, for every \$1 per barrel reduction of the oil price, there is a \$25 billion annual gain by oil consuming countries and a \$25 billion loss to oil exporting countries. A \$5 reduction of the crude price over the long term would save \$125 billion per year for the oil importing countries. One quarter of this benefit accrues to the US.

Given continuing instability, OPEC members believe it will take at least five years for Iraq to pose any real threat to OPEC's target oil prices. But the US oil industry is in it for the long haul. They know that global oil supplies are likely to begin a permanent decline sometime around 2020, at which time OPEC and Saudi Arabia will have the US economy by the jugular. ❖



Pedestrianizing Asian Cities



Jaipur's Bapu Bazaar

As Asian downtowns become increasingly clogged with traffic, and wealthy shoppers and tourists flee to highway-side hypermarkets and multiplexes, downtown businesses are pressing their mayors to act. Though some mayors build new highways, others are fighting back with new pedestrian zones. These car-free areas not only improve the quality of life and re-vitalize the city center, they are proving to have the sort of high-profile political appeal that wins votes.

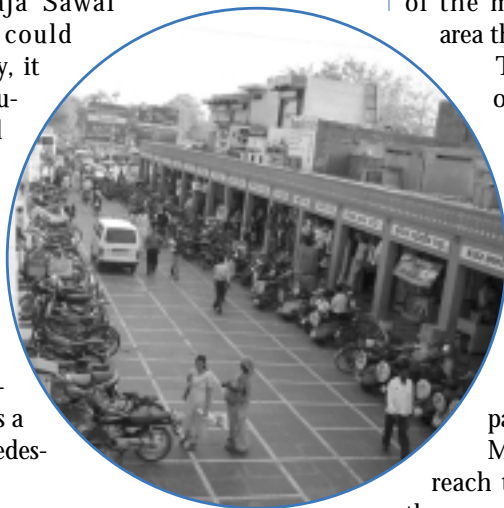
While pedestrian zones in newer US cities, which grew up around the automobile, have been a mixed success, they have flourished in older European cities. The first efforts in Asia's ancient cities show tremendous promise. The new pedestrian zone on Nanjing Road in Shanghai (see Cover) has some of the heaviest pedestrian traffic in the world. Chinese stores are winning shoppers back from Carrefour. Walking and transit trips are replacing car trips, and downtown has become less polluted, safer, and nicer.

But successful pedestrian zones are not only a matter of shutting the streets to traffic. Critical to success is the creation and management of a safe, clean, and attractive shopping environment. So far, the success stories have been in China, where government is powerful and wealthy, crime is minimal, and street hawking and parking are tightly controlled. Achieving success in more chaotic but also more democratic Indian and Indonesian cities is proving a challenge.

Michale King

Jaipur's Pedestrianization Program

Jaipur, the Pink City, is one of the most beautiful cities in India, and home to world-class architectural treasures like the Hawa Mahal. Built in 1799 as a place where the women of Maharaja Sawai Pratap Singh's court could observe street life in safety, it now offers a view of vehicular exhaust, litter, and twisted power lines. Jaipur's historical core is clogged with smoke-spewing and noisy motorcycles, motor-rickshaws, and taxis. With its heavy reliance on tourism, and a well-preserved walled city, Jaipur is a natural for a world-class pedestrian zone.



The Plan

Discussions for pedestrianization inside the walled city began in May of 2000. The Municipal Secretary at the time, G. S. Sandhu, developed a three-phase program, and planned for a budget of about \$275,000. Phase I envisioned the pedestrianization of a narrow street passing through the Bapu Bazaar, then expanding to the Nehru Bazaar, Jawahar Bazaar and Indira Bazaar. In Phase II, the Johari Bazaar, Kishan pole market and the Chauda Rasta road that passes in front of the Hawa Mahal, would be made completely vehicle free. In Phase III, the whole walled city would be pedestrianized, with only cycle rickshaws and battery operated buses allowed.

Implementation

Hope for turning Jaipur into an international urban treasure revolved around the success or failure of the first phase. So far, success has been mixed. In 2001, the Jaipur municipality spent just under \$1 million closing the road through the Bapu Bazaar, hiring security guards to restrict vehicles on the three connecting roads leading to the market. They reconstructed the road in red stone, put in a fountain, buried electrical lines, improved drainage facilities, and put out garbage cans while banning the dumping of solid wastes on the road. Access to freight delivery vehicles was restricted to the hours of 12 pm to 2 pm.

The Results

After the pedestrianization, according to the merchants, business in the market area overall improved. However, with traffic conditions unpredictable, trucks continued to arrive throughout the day, so the time restriction on truck deliveries was dropped. The improved business environment also did not benefit everyone equally. Initially, parking was provided at the two ends of the market area, in what used to be the through street. While larger, off-site parking facilities are

planned, they have not yet been built. As a result, shops with ugly parking facilities directly in front of them lost customers. Businesses far from the parking area suffered because some shoppers did not want to walk all the way to the middle of the market area. Shops just inside the pedestrian area thrived.

The shops that were the losers in this redistribution of space lobbied the government to pedestrianize the entire area at once and provide off-street parking somewhere, and to meanwhile re-open the street to motorcycles and cabs dropping off shoppers at specific stores. The Municipality agreed. Currently, the road has been re-opened to motorcycles (most of them are owned by the shop owners, and used for their own errands), and to taxis dropping off customers. The current plan is to revert to full pedestrianization as soon as off-site parking facilities have been constructed.

Most of the shoppers interviewed use motorcycles to reach the market. About 40% of those interviewed said they supported the program. Shoppers' main complaint is a lack of parking facilities.

It would be a shame if Jaipur's future as a world-class pedestrian space were to collapse due to lack of off-site parking



Jaipur's Hawa Mahal, slated for pedestrianization.

facilities and because some sort of compensation fund among the shop owners could not be developed.

Hyderabad's Char Minar Area Pedestrianization Project

Hyderabad, India, is probably best known for the famous Charminar, an ancient monument to victims of the plague. Built in 1591 by Quli Qutub Shah, it is considered his masterpiece. Unfortunately, this fabulous monument, in the

continued on p. 24

heart of Hyderabad's historical center, is virtually inaccessible and badly damaged by air pollution, largely because it is in a traffic island surrounded by thousands of rushing, highly polluting vehicles. In fact, the entire historical core of



Hyderabad's Char Minar monument to the plague victims: slated for pedestrianization.

Hyderabad is now blighted because air and noise pollution have destroyed the area's once majestic character.

Several years ago, city officials began a project to increase tourism and revitalize the area, the centerpiece of which was a pedestrian-only area around the Charminar. By 1998, the Municipal Corporation of Hyderabad had appointed a project leader and project team, and the Andhra Pradesh Tourism Department (APTD) contracted Vastu Shilpa Consultants (VSC) to develop the plans.

By April of 1999, VSC had developed a draft master plan for the entire historical core. VSC realized that creating a pedestrian-only area immediately around the monument would lead to only a cosmetic change around the Charminar, and proposed to pedestrianize a much larger area. VSC then thoroughly surveyed and digitally mapped the entire historical city center and its infrastructure. They also did a detailed traffic and parking analysis, hoping to avoid expensive road construction that would damage historical buildings. These plans were then actively presented, discussed, and modified in meetings with NGOs and the press, and city officials. The

final plan was approved by the Provincial Government in 2001, and work began in 2002.

The shoppers in the area are broadly supportive of the plans. They say it is impossible to park there anyway, so they would be just as happy to walk from decent parking facilities. Many shopkeepers are supportive, others are mixed, and some of them are opposed. The opposition seems mainly based on the fact that they drive to their shops, and would no longer be able to park in front of them. Initial opposition by some shopkeepers is typical, but usually changes once the tangible benefits are observed.

To deal with diverted traffic, some roads have been widened. Further proposed widenings, however, are being met with opposition. ITDP has initiated discussions with the municipality and the provincial government about serving the area with a BRT link connecting to the commuter rail system, and the proposal is being considered.

Some restoration work has already begun. Char Kaman's, which once enclosed the paradise gardens of Qutb Shahi Kings and stone arcades at Gulzar Hauz was completed on August 15, 2001. Patthargatti Street's original architectural character, with famous arcades alternating with colonnades of stone, is being restored. Controls and restoration aimed to restore value to the amazing urban design carried out by Nizam in the early 20th century and withhold further encroachments is also being developed.

Work has also already begun on the proposed pedestrianisation of Laad Bazaar. Tenders have been floated for constructing the planned road widening, parking lots, street design, infrastructure & lighting, street furniture, utilities and signage scheme. The final proposal for a vehicle-free buffer zone around Charminar has also been submitted and intermediate traffic rerouting worked out, though not yet implemented.

Yogyakarta, Indonesia

Pedestrianizing Malioboro Avenue To The Sultan's Palace

Yogyakarta, Indonesia is the center of Javanese culture, and home to the Sultan, who is frequently discussed as a possible next President in Indonesia. Malioboro Avenue is the main commercial spine of downtown Yogyakarta, and it leads directly to the Sultan's doorstep.

In the mid-1990s, as part of a World Bank urban improvement project, Malioboro Avenue was redesigned. The thoroughfare was converted from a busy mixed traffic street into a

two-lane one-way street, a wide non-motorized traffic lane was added where traditional Indonesian becaks continue to ply, and pedestrian space was widened. Gradually, however, vehicle parking and street vendors have encroached on the pedestrian space. The constant traffic, pollution, noise, and trash all detract from the areas commercial character, driving wealthier shoppers to mall-like alternatives at the urban periphery.

As Yogyakarta relies heavily on tourism, in the late 1990s, both the Provincial and Municipal Government began plans to fully pedestrianize Malioboro Avenue. Leadership of the project was basically in the hands of Swiss-funded consultants Elektrowatt. While full architectural designs were never developed and complete traffic impact studies never conducted, a preliminary urban design concept, traffic plan, and budget were developed so the project could be presented to the Japanese Bank for International Cooperation for possible funding.

The Municipality tried a temporary closing of Malioboro without implementing any other measures. For one month one summer, they closed Malioboro from 3 – 9 every Saturday and Sunday, which is the peak traffic time for the area, exempting hotel guests, cargo vehicles, and some others. The closing was announced through the mass media.

Public attitudes to the temporary pedestrianization were mixed. Motorcyclists complained, street peddlers complained, and the shop owners complained. While shopkeepers were not formally polled, Electrowatt estimates that opinions were evenly split. Most people felt the municipality was not serious, as they did no simultaneous improvements in the urban landscape. Most of them support the full pedestrianization plan, which also includes new parking facilities and special markets for street vendors, relocating them off Malioboro.

Currently, it looks unlikely that JBIC will finance the project any time soon. The regional government added many less well-developed traffic improvements into the JBIC loan proposal, and the national government has not yet made it a priority.

Thus, the municipality is now searching for ways of implementing the project on its own. The project's primary costs relate to land acquisition and construction for the parking facilities, the markets for vendors, and some road widenings on parallel roads. Many of these elements, however, may not be necessary for project success, and a lower cost, incremental approach is being explored.

One idea presented by the Yogyakarta planning depart-

ment was to turn Malioboro into a very short toll road, a sort of small area congestion pricing scheme, but most experts and the business community felt the proposal would do little to improve the area.

A major stakeholder meeting was held by Gadjah Mada University in July of 2003, where the municipality, the vendors, the parking attendants, major businesses and NGOs, and experts from ITDP and the US-based architectural firm Development Design Group, combined efforts to come up with an interim design concept acceptable to everyone. One proposal that enjoyed support was to fully pedestrianize one short section of the existing roadway, while using sections of Malioboro leading up to this fully pedestrianized area in part for additional parking.

Whatever plan goes forward, it will have to deal with the numerous competing interests of several politically powerful groups. Currently, the largest stumbling block is resistance from the parking monopolies that control the area. The



Yogyakarta's Malioboro Avenue: pedestrianization planned

street vendors, which are divided into several unions, are also concerned. ITDP's Indonesia staff is currently holding several more detailed stakeholder workshops with each of these groups to see if a mutually acceptable plan can be developed. ITDP and Gadjah Mada University are meanwhile working on the traffic impact analysis and a traffic demand management plan in cooperation with Michael Replogle of Environmental Defense, and on the architectural design hopefully in cooperation with Development Design Group of Baltimore. ❖

Walter Hook



Car Free Days Go Global

by Oscar Edmundo Díaz

After 80 years of rebuilding cities for cars and pushing pedestrians aside, a growing number of cities are holding Car Free Days to show their citizens an alternative future. Car Free Days publicize the benefits of reducing automobile use in a city. People see that they can get around without their cars, and are able to enjoy streets without noise, traffic, air pollution, and dangerous cars. Cafés, parks and sidewalks brim with people enjoying the car-free streets. People save time because they are not stuck in congestion, there is unprecedented social integration, environmental quality rises as noise and pollution fall, and tranquility replaces the stress of driving.

Bogotá, Colombia was the first to close an entire city to private cars on a normal working day. On Thursday, February 24, 2000, Mayor Enrique Peñalosa held the world's largest Car Free Day. From 6:30 a.m. to 7:30 p.m. private cars were banned from all city streets. While some 850,000 private cars stayed in their garages, city residents turned to public transit, bicycles, taxis, regional trains, roller-skates and other modes of transit. Now, an increasing number of cities are following Bogotá's lead.

The Renaissance of the Car Free Cities

Though Bogotá's annual event is the largest Car Free Day, it was not the first. The first attempt to hold a Car Free Day-like event was in Delft in 1972 (see chart). It was organized by civic groups, not by the municipality. A few years later, Eric Britton from Ecoplan – The Commons, an NGO based in Paris, proposed what we call now the Car Free Day. This inspired La Rochelle, France to have the first Car Free Day in 1997. One year later, in a joint initiative lead by the French Minister of Environment, Dominique Voynet, the first National Car Free Day was held in 100 cities in France, Italy and Switzerland. Then, in 2000, Environment Commissioner Margot Walström and Mr. Claude Bochu launched, within the European Commission, the European Car Free Day, an initiative signed by most of the Environment Ministers of the European Union countries. The chosen day for the event is September 22 of each year. The event has also expanded to Mobility Week – seven days of events and activities related to sustainable transportation.

*Above left: Car-Free Momentum Grows –
A record number of cities participated in Mobility Week 2003
Below: Bogotá's 7th Avenue on the February car free day.*



In March 2002, the Commission of Sustainable Development (CSD-9) of the United Nations Department of Economic and Social Affairs decided to promote the use of public and alternative modes of transport in urban areas. Then, the UN launched its own Car Free Days program (UNCFD), developing a training seminar for mayors from Latin America and the Caribbean, held in Bogotá in 2003.

The past year has seen many more expansions of Car Free Days. ITDP has supported governments and non-profit organizations in their Car Free Day initiatives, including Cape Town and Jakarta. Quito also recently held their first Car Free Sunday. This February, ITDP sent delegates from several countries to the International Seminar on Human Mobility, which opened during the Car Free Day.

More cities than ever joined the European Car Free day on September 22, not only from Europe but also in other continents – Argentina, Colombia, Canada and Australia were among the countries with participating cities. A website was set up for the purpose of connecting planners of these events: www.22september.org

The World Car Free Day movement lead by Car Busters also had several participating cities. But this is only the beginning. Next year is expected to be the biggest Car Free Day movement ever.

In April 2003, the United Nations, during CSD 11, organized a side event with the participation of the European Commission, the Institute for Transportation and Development Policy, International Union of Public Transport and Car Busters. The main proposal is to have a worldwide Car Free Day movement lead by the United Nations and the European Commission. The internal approval process of these two organizations will take some time, but the collaboration has already started and the call

for more cities has been successful. This political support is extremely important because it provides backing for mayors and NGOs that find strong opposition to Car Free Days in their cities. 2003 will record about 2,000 participating in Car Free Days, next year will likely include several hundred more.

Car Free Myths

Car Free Days often find opposition – from merchants, gas stations, car parking lots, car producers, and citizens. But the arguments used against Car Free Days are often based on myths. For example, merchants do not always lose money. In fact, in several cases stores have sold more on the Car Free Day than



The Car Free Day History

1972	Delft, The Netherlands, first Car Free Day-like
1974	Switzerland, four Car Free Sundays as response to the oil crisis
1981	Eastern Germany
1992	San Francisco, California, the beginning of the Critical Mass movement
1996	Reykjavik, Island.
1996	Bath, United Kingdom.
1997	La Rochelle, the First Car Free Day
1998	France, First National Car Free Day
1999	The Netherlands, First National Car Free Sunday
1999	France, Italy and Switzerland.
2000	Italy, Car Free Sundays.
2000	Bogotá. The First city-wide Car Free Day
2000	First World Car Free Day
2000	European Car Free Day
2001	Bogotá. First Car Free Day approved by a referendum
2001	Earth Car Free Day.
2002	First UN Collaborative in Latin America
2003	Largest number of cities holding a Car Free Day
2004...	

on a typical Saturday or Sunday. Specials, sales, and Car Free Day promotions help increase their sales.

Studies have also shown that expenditures during the week of a Car Free Day are the same as any other week of the year, and the society wins in integration, solidarity, environment, and enjoyment.

Another myth is that Car Free Days are expensive exercises that take resources away from other, more important needs. Actually, they cost almost nothing. To cover the modest costs, a public-private partnership can work in a win-win situation. Advertisement can be sponsored by the private sector and the planning and implementation can be handled by the city government. National governments and the private sector can provide pay for measures and polls that are needed to evaluate the progress of the Car Free Day each year.

Your Turn

An American university professor coming back to the United States from a Car Free Day experience in Bogotá wrote: "I am back in my city, but my mind is still riding a bicycle in the car-free streets of Bogotá." The feeling is unique, reclaiming the space that should always be ours for just one day, feeling the freedom and breathing fresh air, looking at kids running freely and happily. Now, cities can rely on the expertise of those that have already made this happen – it is just a matter of changing the minds of mayors that are not fully convinced of Car Free Day benefits. If the World Car Free Day movement succeeds, cities that don't participate will look hopelessly out of fashion. ♦

e-update

Between print editions of Sustainable Transport, ITDP now publishes a free monthly e-bulletin. Below are highlights from this year's bulletins. The full text of these and many more stories are available online at: www.itdp.org/STe/index.html. To subscribe to the e-bulletin, visit: www.itdp.org or e-mail lpeterson@itdp.org

International Seminar on Human Mobility Held in Bogotá

(February, 2003-No. 4)

In February, hundreds of transportation planners and decision-makers from 30 countries arrived in Bogotá for the International Seminar for Human Mobility. During the four-day seminar, visitors were able to see first-hand Bogotá's successful Bus Rapid

Transit system of dedicated bus lines, called "TransMilenio," as well as the city's miles of bicycle and pedestrian routes, including the world's longest pedestrian-only street. Visitors also witnessed the world's largest Car-Free Day, during which the entire city of 135 square miles (35,000 hectares) was free of private motorized vehicles.

The experience in Bogotá influenced a number of visitors to advocate for the implementation

or improvement of Bus Rapid Transit systems, Car Free events, and plans for bicycling and pedestrian infrastructure in their own cities.

Stopping the Downward Spiral of Derelict Land: The Story of Sternberk

(February 2003-No. 4)

Sternberk, a small town in the Czech Republic, is emerging as a model of proactive local brownfield revitalization. In a short time, Sternberk became one of the first municipalities to analyse its brownfield situation using ITDP's Brownfield Audit Program, succeeded in forging a partnership with the owners of one of the town's largest brownfield sites, and applied for a grant to redevelop the site for industry and housing.

Tehran on the Road to More Sustainable Transport

(March 2003-No. 5)

After a great deal of internal debate and a visit to Bogotá, the city of Tehran is poised to add a Bus Rapid Transit system to its transport strategy. On the invitation of ITDP and United Nations Department of Economic and Social Affairs (UN DESA), the Mayor of the 7th District of Tehran, the Secretary of Transport, and an advisor to the Mayor took a study tour of Bogotá, Colombia in conjunction with the International Seminar on Human Mobility. Site visits and consultations with city officials from both Bogotá and other Latin American cities led to the city's commitment to create a similar system in Tehran. The BRT system will complement the growing number of sustainable transport projects already begun by Tehran's last two administrations.

First Car-Free Sunday Announced in Quito

(May 2003-No. 6)

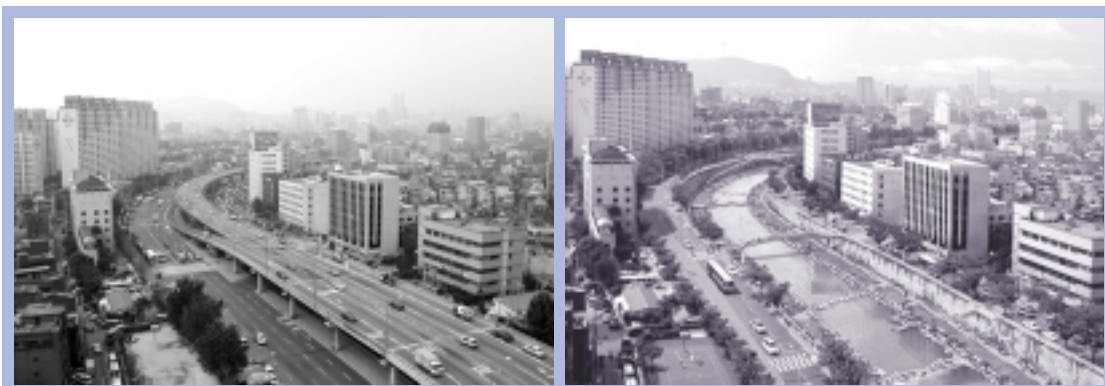
On April 27, Quito, Ecuador will close 10km of streets through the heart of the city to car traffic, leaving space for bicyclists, pedestrians and rollerbladers. The event, called Ciclopaseo Sunday, was recently approved by Quito Mayor Paco Moncayo. A management committee formed to oversee the promotion of cycleways in the city hopes Quito will be able to make the Ciclopaseo a monthly event. The decision follows a recent major conference on bicycling and walking in the city. (See issue No. 5)

Seoul to Raze Elevated Highway, Giving Way to Revitalized City Center

(May 2003-No. 6)

Seoul, South Korea is the newest addition to a growing list of cities tearing down urban highways to make room for a more human environment. San





The six-lane Cheonggyecheon highway (left) will soon be transformed into this riverscape (right).

Francisco, Portland and Toronto have already finished these projects, Milwaukee is in the process of doing so and other cities, including Akron and New York, may soon follow suit.

Fulfilling a central campaign promise, Seoul Mayor Lee Mung-Bak is moving forward with the restoration of a downtown riverfront, tearing down an elevated highway and building a Bus Rapid Transit corridor. In office for only two months, Mayor Lee has wasted little time in announcing a new vision for Seoul and taking steps to see it to fruition.

Mayor Lee will take down the six-lane Cheonggyecheon, decontaminate a river buried below, and create a park and wide pedestrian corridor on the shores of the river. The destruction of the Cheonggyecheon highway is part of Mr. Lee's redevelopment strategy for the entire area north of the Han River, which he hopes will become Seoul's economic, cultural and environmental center.

The six-lane Cheonggyecheon highway will soon be transformed into this riverscape.

Blair's Budget Cuts Undermine Benefits of London's Pricing Scheme

(June 2003-No. 7)

London, which has suffered from a lack of investment in transit infrastructure for decades, attempted to remedy the situation by dedicating 100% of the revenue from its successful congestion charging program to transit improvements. However, Blair's budget, issued in December, undermines this benefit by cutting the Government's allocation to Transport for London by an amount nearly identical to that raised by the congestion charge.

Despite the blow to Mayor Ken Livingstone's transit investment plan, the congestion pricing program is still continuing to impress observers with

its successes. Transport for London continues to report a 20% reduction in automobile traffic in the area covered by congestion pricing. Bus riders have benefited from more reliable and faster service (see e-ST No5). London cyclists are also raving about the benefits of the plan.

Modern Rickshaw Credit Plan Unveiled in Jaipur

(July 2003-No. 8)

ITDP recently unveiled a new revolving credit fund to support the purchase of modern cycle rickshaws in Jaipur, India. The fund will allow rickshaw operators to purchase modern vehicles at a very low interest rate. The first 20 vehicles sold under this program, which were co-financed by a local charity organization, were distributed during a public event in Jaipur on May 11.

World Bank Policy Documents Draw Praise, Criticism

(July, 2003-No. 8)

Two important documents were recently released by the World Bank. The first document outlines the World Bank's priorities for the transport program (OP11) of the Global Environmental Facility (GEF). The paper, largely based on a 2001 meeting of the GEF's Standing Technical Advisory Panel in Nairobi, is the first official policy statement to reflect the GEF's new commitment to Bus Rapid Transit, non-motorized transport and traffic demand management strategies. The second document is a draft of the upcoming Mobile Source Handbook being developed by the World Bank Air Quality Thematic Group, which received extensive comments from ITDP, Lloyd Wright, the Center for Science and Environment, and other leading experts. ♦

Source: Seoul Development Institute

new titles



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BULLETIN BOARD

Sustainable Planning and Development 2003

1 - 3 October 2003 Skiathos Island, Greece
Organizer: Wessex Institute of Technology, UK and
Department of planning and Regional Development,
University of Thessaly, Greece
Contact: Rachel Green, Wessex Institute of Technology
Ashurst Lodge, Ashurst
Southampton, SO40 7AA
Phone: 44 (0) 238 029 3223 • Email: rgreen@wessex.ac.uk
www.wessex.ac.uk/conferences/2003/planning03

International Walk to School Week

October 6-10, 2003
www.iwalktoschool.org

ENVIROTECH 2003:

Clean Air Exhibition and Regional Workshop

October 7-9, 2003 Jakarta, Indonesia
Organizer: Mitra Emisi Bersih MEB
(Partnership for Clean Emission)
Contact: paul@swisscontact.or.id, meb@kpbb.org

Healthy Cities 2003 Congress

October 19 - October 22, 2003
Belfast, Northern Ireland
Organizer: World Health Organization
Contact: Avenue Appia 20,
CH - 1211 Geneva 27, Switzerland
www.who.int/en

Sustainable Multi-Modal Transportation for Chinese Cities International Seminar

October 20-21, 2003 Shanghai, PRC
Organizers: Shanghai Jiao Tong University, Natural
Resources Defense Council (NRDC)

CLATPU XII

Latin American Congress of Public and Urban Transport
October 27 - 31, Bogotá, Colombia
www.clatpu12.com

Local Action 21, Local Governments Implementing Sustainable Development, ICLEI World Congress 2003

November 3 - November 7, 2003 Athens, Greece
Organizer: ICLEI
Contact: ICLEI's International Training Centre
Phone: +49 761 368 9220 • Email: world.congress@iclei.org
www.iclei.org/worldcongress

Czech IFHP Seminar – National Urban Development Policy

Brno, Czech Republic Nov. 10-11, 2003
Organizer: The International Federation
for Housing and Planning
Contact: Jaromir Stejskal
Tel.: +420 54221 3270 • e-mail: stejskal@saura.cz
www.ifhp.org

"Towards a better quality of life in cities"

Eurocities Conference & AGM 2003 -
Porto, Portugal November 26 - November 29, 2003
Organizers: ACCESS-EUROCITIES for a new
Mobility Culture and TeleCities
Contact: EUROCITIES Brussels Office,
Square de Meeus, 18, 1050 Bruxelles, Belgium
Phone: + 322/ 552 08 88
Fax: + 322/ 552 08 89
Email: info@eurocities.be
www.eurocities2003porto.org

Africities Summit

Yaounde, Cameroon, December 2-6.
www.pdm-net.org/africities/fr/yaounde.htm

Better Air Quality 2003

17-19 December 2003 Manila, Philippines
Organizers: Clean Air Initiative for
Asian Cities (CAI-Asia) and the Air Pollution
in Megacities of Asia (APMA) Project
www.worldbank.org/wbi/cleanair/caiasia/baq2003

TRB Annual Meeting

Washington, D.C. January 11-15, 2004
gulliver.trb.org

Tour D'Afrique Expedition 2004

Cairo, Egypt to Cape Town, South Africa
January 14 – May 15, 2004
Tel: 416 364-8255
E-mail info@tourdafrique.com
www.tourdafrique.com/index.htm

Congress CODATU XI

Bucharest, Romania April 22-24, 2004
Organizer: The International Association CODATU
(Cooperation for the continuing development
of urban and suburban transportation)
www.codatu.org

Walk21

June 2004, Copenhagen, Denmark
www.walk21.com

The 28th World Urban Development Congress (INTA28)

Kuala Lumpur, Malaysia July 2004
Nassau Dillenburgstraat 44 NL-2596 AE
The Hague The Netherlands
Tel: +31 (0)70 324 45 26
www.inta-aijn.org



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