

SUSTAINABLE *TRANSPORT*

Number 3

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SUSTAINABLE *TRANSPORT* has been nominated for a Right Livelihood Award and for Best New Publication by *UTNE Reader*.

Sustainable Transportation:

Are We Winning the Battle But Losing the War?



Letter from the Executive Director and Program Director

Much of ITDP's efforts in the past year have been dedicated to reforming the nature of transport-sector lending by Multilateral Development Banks (MDBs) like the World Bank. The MDB Transport Sector Task Force, which was set up last year by the U.S. Department of Treasury at the urging of ITDP, EDF, IIEC, and the U.S. E.P.A., has been the central vehicle for this effort. The Task Force has been helping advise the U.S. Treasury and the U.S. Executive Director of the World Bank on how to vote on particular projects and programs of the World Bank. ITDP and the Task Force have been pressing for a fundamental review of MDB transport sector lending for a long time, to serve as a guide to future policy. This document was intended to evaluate the impact that the World Bank's transport sector lending has had on their broad development goals of economic development, meeting basic human needs, and promoting environmental sustainability. It was the view of most of the Task Force that past World Bank lending had fallen short in meeting these goals, and that a new policy direction needed to be outlined.

The Transport Sector Review is currently being drafted by World Bank staff, and initial copies of the draft were circulated to the Task Force for comment. We expect the Bank to open up the next draft to a wider audience for comment. The World Bank deserves credit for making this process far more open to outsiders than is normally the case. They also deserve credit for their recent cover articles promoting non-motorized transport in *Bank's World* and *World Bank News*, and

for funding non-motorized transport projects in Peru, Sierra Leone, Mozambique, India, Chile, Ghana, Mali, and Tunisia. This is indeed significant progress and we can all be proud of having helped to bring about this change.

The World Bank has also agreed to look at the economic assessment procedures they use to make transportation investment decisions. ITDP's recent publication *Counting on Cars, Counting Out People*, is a thorough review of how current procedures are biased in favor of private cars and against other forms of transport. We are still hopeful that these methods will be fundamentally revised, rather than merely tinkered with.

While very encouraged by these developments, we are, however, concerned that the increasing MDB support for non-motorized transport projects is indirectly related to efforts to simply privatize public rail and transit systems as a panacea for addressing transport problems. The new *World Development Report* and probably the Transport Sector Review as well, are likely to strongly promote the privatization of public bus and rail lines, while leaving unaddressed the massive public subsidies to road and highway infrastructure. While the long term impacts of privatization are much debated, one likely result is increasing public transit fares, decreased ridership, and the loss of service to low volume and low income areas.

Our concern is that the bicycle projects will be used as political cover for a broader privatization agenda which is likely to have negative environmental and equity

impacts. Meanwhile, MDB-subsidized highway construction continues unabated. Thus, we could be winning the battle and yet losing the war.

ITDP has also launched a "Sustainable Human Settlements" Initiative. Low income neighborhoods and squatter settlements continue to be bulldozed in order to make room for new highways that are primarily used by high income motorists, simultaneously aggravating the shortage of low income housing. The spread of low density squatter settlements at the periphery of many large cities in developing countries is being driven by two processes: the displacement of low income people from central cities and a general lack of affordable housing. The fact that these settlements are informal also means that most of them do not have proper sewage, drainage, or garbage collection, leading to serious problems of disease and water pollution. These sprawling low density settlements are extremely expensive to retrofit with infrastructure and are trapping millions of people in a costly dependence on long-distance bus commutes. Higher density publicly-subsidized housing closer to city centers would allow people to walk or bicycle to work, but the withdrawal of funds for low income housing has made it difficult for governments to encourage a more environmentally sustainable pattern of human settlements.

This assessment has driven ITDP to seek common cause with the Habitat International Coalition, (HIC) the world's largest coalition of housing rights advocates. A vast network of housing-oriented

On the 10th anniversary of ITDP's first project, "Bikes Not Bombs", ITDP would like to thank our over 2000 supporters who have kept the struggle alive. Our particular thanks go to the Turner Foundation and the New Land Foundation for their continuing support.

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community groups exists in developing countries, and 300 of them, from 60 countries, are directly or indirectly affiliated with HIC. In the Fall of 1993, ITDP became a member of HIC, and attended the organization's annual meeting in Manila, the Philippines. Working through the Habitat and the Environment Subcommittee headed by Peter Friedland, ITDP presented a program entitled "Highways, Evictions and Resettlement" to a large group of coalition members.

ITDP has also become a member of the United Nations Non-Governmental Committee on Human Settlements. ITDP recently gave presentations first to the Committee, and then at the Committee-sponsored conference "Planning for Sustainable Communities" at City University of New York.

After working together we realized that many housing activist organizations do not immediately see the transporta-

tion-housing-environment connection. One of the chief accomplishments of ITDP's mission to the Philippines was to raise the consciousness of housing and environmental activists and public officials from around the world of the interconnectedness of the issues of housing, transportation, and the environment. While NGOs struggle to pass resolutions for the "right-to-affordable-housing", it is becoming clear that the right to "affordable mobility" is also a critical concern for low income people. Housing activists are often very effective in fighting for the rights of squatters who are being evicted but do not often question the underlying automobile-oriented development paradigm which leads to the widespread evictions in the first place. On the other hand, environmentalists often miss the important role that insufficient investment into low income housing, insufficient support

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Eastern Europe:

Paving the Way to Environmental Disaster?

by Walter Hook

Before the political transformations of 1989, Eastern Europe and the former Soviet Union had an abysmal environmental record. The combination of inadequate pollution controls, energy inefficiency, and an over-reliance on coal for fuel led to some of the highest emission levels per unit of GNP in the World. In the transport sector, the domestically produced two-stroke engine cars such as the East German Trabant and the Wartburg were major sources of air pollution, and became a symbol of Eastern Europe's environmental problems.

In other ways, however, the Eastern European and former Soviet transportation systems had tremendous potential for long term environmental sustainability. Use of private cars was heavily discouraged, and some of the most extensive public transit systems in the world were built and maintained. Heavy subsidies and low fares kept ridership on the transit systems increasing

were an instrumental force in the transition to democracy.

However, in face of the need to fundamentally restructure the economy, many of the initial environmental concerns seem to have fallen by the wayside. The new governments seem to believe that the transition to Western capitalism will in and of itself resolve the environmental problems that they face.

Here in the West, we know better. The existence of free markets and a large environmental movement did not prevent the U.S. from becoming the most auto-dependent country in the world, responsible for some 48% of the global CO₂ emissions that cause global warming. Roughly a quarter of these emissions come from the transport sector, principally cars and trucks. In the rush to embrace Western democracy and Western capitalism, Eastern Europe is also being pushed to

In the last three years, half of Russian domestic freight has shifted from rail to truck, and public transit ridership in Eastern Germany has fallen 47%.

into the late 1980s. With few cars on the road, bicycling and walking were encouraged, particularly in secondary cities. As a result of these policies, the region is in the unique position of being able to learn from mistakes made in the West and create a transportation system which is economically and environmentally sustainable.

Much of the severe environmental degradation in Eastern and Central Europe and the former Soviet Union was the result of both a political system insensitive to the environmental concerns being raised by citizens groups, and the enormous waste of natural resources caused by the inefficiencies of a centrally-planned economy. As a result, the environmental movements

embrace Western-style car culture. Auto use is exploding, and governments are ill-prepared to regulate the likely dramatic increases in air and water pollution.

Prior to the collapse of the Soviet Union, very few people in Eastern Europe drove cars. Due to tight restrictions on imports and low domestic production levels, people had to wait over ten years to buy a car. Once they received the car it was generally of relatively poor quality. There was also, as a matter of policy, very few gasoline stations, repair shops, and other service facilities for private cars. This made the heavily subsidized transit system a much more attractive option.

In Hungary, in the late 1980s, for

example, 58% of all passenger trips were made by public transport, 31% by walking and bicycling, and only 11% by private car, compared to the U.S. where 86% of all trips are made by private car. In Czechoslovakia, 35% of all passenger trips were made by walking or bicycling and 52% by public transport, while only 13% of trips were made by private car. With many fewer people driving private cars, air quality could be dramatically improved by stricter emissions standards and cleaner fuels.

The increase in private car use actually began in the early 1980s, before the fall of communism. Between 1980 and 1990, for example, the number of passenger cars per 1000 people increased in Poland from 157 to 282 and in Eastern Germany from 150 to 296. This rapid motorization had already begun to depress the number of bicyclists in Eastern Europe. Roads are increasingly congested, air quality on the roads deteriorating and the risk of being struck by a car is increasing dramatically, particularly in major cities. Until the fall of communism, however, these increases had no major effect on the share of total passenger trips made by public transportation.

After 1989, however, things began to change dramatically. In Eastern Germany in the three years since unification, auto registrations per 1000 inhabitants have grown by 57%, while public transit ridership has fallen by 47%! The number of autos per 1000 inhabitants, currently at 296, is projected to increase to 458 by the year 2000. While the changes are not as fast in other Eastern European countries, motor vehicle fleets are nevertheless increasing at the alarming rate of 6% to 10% per year, some of the fastest growth rates in the world. It is likely that these increases will further accelerate as their economies recover from economic restructuring.

While after years of feeling themselves second class citizens, and seeing their lower quality cars as a symbol of inferior status, it is inevitable that Eastern Europeans will want the same luxuries that they see their Western European counterparts enjoying. But many of their Western European counterparts are doing everything they can to control the use of the private vehicle, by investing in bicycle and public transportation infrastructure, banning motor traffic in central cities, and

traffic calming residential streets.

In Holland, 10% of the surface transportation budget is now spent on bicycle facilities, and now more than 30% of all trips there are made by bicycle. Subsidies to public transportation have been increased to \$5.7 billion a year, and taxes on automobile purchases and gasoline have been increased significantly. These policies are projected to dramatically reduce CO2 emissions by the year 2000. Even here in the U.S., learning from a history of mistakes, we have recently mandated intermodal transportation planning through the Intermodal Surface Transportation Efficiency Act, and are working toward the development of a regulatory framework to minimize the environmental impacts of growing motor vehicle traffic through the Clean Air Act Amendments of 1990.

Sadly, just as Western Europe and the U.S. are shifting public subsidies back in favor of less-polluting public transportation and non-motorized vehicles, the likely result of structural adjustment policies being encouraged by the IMF and MDBs is to shift the balance of subsidies heavily in favor of private motor vehicles. This is likely to lead to devastating environmental impacts, particularly because the environmental regulatory framework to control traffic-related air and water pollution has yet to develop, and the institutional capacity to enforce the equivalent of a Clean Air Act does not yet exist.

The World Bank, the European Bank for Reconstruction and Development (EBRD), and the European Investment Bank (EIB) are rapidly expanding the level of investment into highway infrastructure and motor vehicle manufacturing in Eastern Europe. At the same time, they are pushing for rapid increases of user fees on public transportation, while insufficiently



New Highways Planned for Eastern and Central Europe

pressing for improved cost recovery from road users. Thus, public subsidies are shifting dramatically away from public transport towards private motor vehicle use. On Warsaw's MZK, their public bus and tram system, operating subsidies were slashed between 1990 and 1991 from \$51 million to \$38 million, and subsidies have been falling consistently for the past 6 years. Local busfares increased between 1989 and 1990 from 1200 Zl to 2000 Zl, which in terms of relative purchasing power in the U.S., would be equivalent to an increase from \$1.15 to \$1.85. As a result, in the same year, monthly ridership fell from 36 million to 32.1 million.

While public transit ridership is being decimated, major new highways are being built with Multilateral Development Bank funds (partially with U.S. taxpayers' money) in Hungary, Bulgaria, Romania, Slovenia, Belarus, and elsewhere. The EBRD is financing \$43 million and the EIB \$25 million of major highways in Bulgaria, and another \$40 million in Poland. In Romania, the World Bank, the EBRD, and the EIB are financing \$256 million worth of highway projects. Some \$90 million of

of public transportation and rail.

Meanwhile, the MDBs have shown less enthusiasm for funding Eastern European rail and public transit projects which are in serious need of modernization. One major exception to this was the recent approval of a World Bank loan to Budapest for upgrading their public transport system.

In the former Soviet Union, less foreign financing is likely to go into new highway construction, and more will be dedicated to road maintenance. Nevertheless, structural adjustment in Russia is causing a major shift in traffic from rail to roads. One half of the domestic freight shifted from rail to truck between 1992 and 1993. This is the result of the rise in the freight rates (1200%), faster even than the inflation rate (1100%), and deterioration of service due to economic chaos. While improving cost recovery is going to be necessary to end the inefficiencies and improve maintenance in the rail sector and public transit, unless cost recovery is handled gradually and simultaneously pursued for road-based

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WOMEN TAKE BACK THE STREETS

Overcoming Gender Obstacles to Women's Mobility in Africa

By Karen Overton

ZAMBEZIA, Mozambique – Dona Helena was pedaling to a local health clinic with emergency medical supplies when her bicycle was surrounded by a crowd of young men from the village. Shouting insults and throwing stones, they chased her as far as the village center. Fortunately, she escaped with only cuts and bruises. These young men were not Renamo guerilla soldiers who tried to prevent her from getting to work by bike. They were local men who felt threatened by the power that the bicycle had given to Dona Helena, the power to come and go as she pleased. For Dona Helena, the bicycle is simply the most efficient and affordable means of doing her critically important job.

Dona Helena did not take the attack lightly. She reported it to the village elders and told them that if they wished to continue to receive emergency medical supplies that the perpetrators would have to be punished and that further harassment of women on bicycles would have to stop. Later, the young men were duly punished for their act, and it was decided that women would be allowed to ride bicycles to improve their mobility.

News of this incident and the final judgment in Dona Helena's favor spread throughout the area, and some of Dona Helena's female colleagues at the Ministry of Health were inspired to use the bikes provided by ITDP's "Bikes for Africa" project in their health outreach efforts.

Clearly, improving mobility for African women is fraught with many challenges, including sexism and cultural stereotypes that discourage women from cycling. When asked why so few women ride bicycles, the residents of Beira gave telling responses: "women don't know how to ride bikes; it's not ladylike for women to spread their legs; women are afraid to ride bikes; women can't be trusted to ride bikes because they may go off and have affairs, and; the man of the house deserves to ride a bike more than the woman." A better understanding of Mozambican culture and the structures of women's oppression which lie behind such statements provide information critical in designing future projects that will empower women by giving them access to basic mobility.



Kor Nam

Meetings with members of groups such as the Women's Organization of Mozambique and the Rural Association of Mozambique confirmed the notion that women don't know how to ride bicycles. In a country where the per capita income is US \$62, a bicycle is still a luxury good. When a bike becomes available, men generally take control of it. Therefore, most women are never given the opportunity to learn this skill. However, the lack of knowledge cannot be equated with the lack of desire. In order to get women on bicycles, therefore, not only did male opposition to women riding bikes have to be overcome, but women had to be taught how to ride. "Bikes for Africa's" cycling-instruction sessions for women generated an enormous amount of enthusiasm. Women took turns on the bikes while two colleagues ran alongside, helping to maintain their balance and cheering when someone was able to cycle on their own.

Another factor that discourages cycling is Mozambican dress. The *capulana*, typical attire for women, is a 2 meter cloth imprinted with African motifs. While beautiful, it impedes the motion necessary to cycle. This is particularly true when riding a men's bike, which is the most commonly imported model. Drawing upon American history, in which the bloomer was designed specifically to give women the freedom to ride a bicycle and

One Mozambican man said, "Women can't be trusted to ride bikes because they may go off and have affairs."

became one mark of the suffrage movement, Bikes for Africa designed the capuleta (a capulana for the bicicleteta). This attempt to influence fashion, however, did not meet with much success due to the cultural and financial constraints of Mozambican women.

Fear of cycling is commonly cited as an obstacle. In fact, roads in Africa are extremely dangerous. The number of deaths per 10,000 motor vehicles is often as much as 60 times higher than in developed countries, and more than 75% of all the people killed are pedestrians and bicyclists. Non-motorized vehicle users are literally being terrorized off the streets. Meanwhile, roads rarely provide separate slow moving vehicle lanes or sidewalks. This means that pedestrians, women headloading large bundles of goods, men pushing large handcarts, bicycles, motorcycles, buses, taxis, trucks, and private automobiles all share the same poorly maintained roads. Consequently, people are often struck by motor vehicles. In many African countries, young people are at greater risk of being killed by a car than by common diseases. Navigating a bicycle among darting pedestrians, speeding motor vehicles, and potholes requires both skill and courage. A report from Ghana indicated that fear for safety was a leading factor that caused parents to prohibit cycling among their kids, which has inhibited the development of a bicycle culture.

Aside from road safety, there are other fears. Many cyclists are afraid of traveling to the city center because of the possibility of being stopped by the police. Approximately 85% of Mozambicans do not speak Portuguese, the country's official language, and women are less likely to speak Portuguese than men. Consequently, women are not only unaware of the traffic laws regulating cycling, but also feel vulnerable when dealing with the police. A traffic ticket may cost up to one third of a day's salary - a price that women cannot afford to pay. In Beira, some women stated that this was the reason they never cycled to the urban center. This reinforced ITDP's position that when designing a comprehensive bicycle project, institutional reform needs to be addressed as well as infrastructure issues.

In Beira, as mentioned above, men often associate female cycling with promiscuity. Several men reported that the cycling position was unladylike. Pants, for the same reason, are also found unacceptable. One man went as far as to suggest that increased mobility for women might encourage a new found sense of freedom that could then lead to extra-marital affairs. This association proves most useful as a justification which limits women's mobility.

In projects aiming at improving women's mobility to promote empowerment, such as ITDP's Beira Bicycle Bank, it was often found that many of the intended female recipients of the bicycle

had turned the bicycle over to their husband. In the Beira project, bicycles were sold below cost to women farmers through a revolving credit program. When interviewed, many of these women reported that their husbands primarily rode the bicycles. When asked why they did not ride the bicycle themselves, the response was usually something along the lines of "because I love my man, he rides the bicycle".

This response, however, reflects less their true desire than their sense of social obligation. It turns out that in some cases husbands, wanting to get the bicycle, had encouraged their wives to enter the program and then to turn the bicycle over to them. For some women, the fact that they had been able to get a bicycle to benefit the household was satisfactory enough. But other women tried to maintain control over their bicycle, and it led to conflict. One report held that one woman was beaten by her husband when she resisted his attempt to stop her from riding the bike.

However, these cultural obstacles, as our initial story illustrates, are not insurmountable. In cases where women were given bicycles to facilitate income generating activities, such as to bring goods to market, men tended to be more supportive of women



bicycling. Fathers were also supportive at times when the bicycle made it possible for a daughter to obtain an education. Finally, when the women are providing a service such as health care delivery which is critical to the community, facilitating this work with a bicycle was also tolerated after initial resistance.

In the Beira project, several women utilized the bike to improve a thriving bizi (small business operation). For Dona Jarinda Joao, the bicycle enables her to take to market the fish that her husband catches. By doing so, she is able to increase her profits by one third because the intermediary transporter was cut out. In another case, Dona Maria Arminda, who earns her income by transporting coal, was able to double her profits because the bicycle allowed her to reduce the time spent in travel and increase the amount of coal transported.

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South Africa:

Mobility in the Post-Apartheid City

by John Griffin

May 2nd, 1994 is the first working day in post-apartheid South Africa. However, the job of dismantling apartheid's legacy will require the dedication of future generations. Apartheid is built into the very urban fabric of South Africa. The separation of races in urban space is one legacy of apartheid which will take decades to dismantle.

The central business districts of South African cities are surrounded by vast rings of under-utilized land which act as a buffer zone between the races. At the extreme periphery lie the sprawling settlements known as townships that are home to some three-quarters of South Africa's non-white citizens. For decades apartheid planners systematically placed Blacks in these townships far from city centers, and far from white suburban enclaves.

Separation of the races within urban space was so important to the system of apartheid that apartheid planners were willing to tolerate the enormous costs and inefficiencies associated with bringing the labor force back and forth from the townships each day. Most of these costs are paid by Blacks, who are forced to travel as far as 100 kilometers to get to their jobs, usually by train, bus or taxi. They have to devote one-fifth of their incomes to transport costs, and spend as much as six hours per day commuting. But because the township dwellers could not possibly afford to pay the full cost of this lengthy trip each day, the South African government subsidizes rail and bus transport between the townships and employment centers by more than US\$500 million annually. Thus, the spatial inefficiency of the Apartheid city has enormous costs paid by Whites and Blacks alike.

Economic activity in the townships, except for the provision of basic needs, was banned by law until recently, reducing the availability of employment in the townships. This means not only that almost everyone has to commute to far off white-dominated urban centers to work, but also that people have to make the long

trip to the city center for non-work related reasons such as shopping that can generally be handled more locally.

While transportation for Blacks is confined to public rail, bus or multi-passenger taxi to get to and from the townships, the transportation needs of South Africa's white population are met almost entirely by the automobile. With household incomes for Black South Africans among the lowest fifth in the world, only one person in one hundred can afford to own a car. In contrast, one in two South African Whites owns an automobile. Planners have therefore designed cities to meet the needs of the white-owned automobile, not the majority of the population. Not surprisingly, South Africa's automobile industry is one of the most advanced in the world, and most major Japanese, German, and American automobile manufacturers have facilities there. In no uncertain terms, the apartheid city depends on the automobile.

Many South African planning conventions have been borrowed from the United States. Just as in the U.S., South African culture has a strong anti-urban bias, which validates above all else the private suburban single family home reachable only by automobile. These values affect low-income South Africans as much if not more than wealthy classes, abetting the problem of highly inefficient settlement patterns.

The legacy of the apartheid city will live on long after apartheid has fallen. The inefficiencies of a dispersed land use pattern will continue to inflate transportation costs, and keep South Africa dependent on imported oil, absorbing precious foreign currency. By generating long distance travel requirements and the need for numerous trips for non-work-related



The Townships

activities, apartheid planning has also exacerbated air and water pollution, an increasing threat to public health. Although an extensive rail network exists in South Africa, it operates far below capacity, owing mainly to riders' concern for personal safety and the fact that the system was not designed to account for the huge urban migration of the last thirty years. The relatively few township train stations are located far from where most people live. Taxis and buses are what most Blacks reluctantly depend on despite being very expensive.

Although little addressed by planners until now, non-motorized transport is an option that could play an important role in both improving access to rail stations and facilitating trips within the townships. The latter is critical to the development of independent Black-owned businesses within the townships, which in turn is critical in reducing the need for both work and non-work related trips to the central cities. In short, non-motorized transport has the potential to increase the mobility of the vast majority of South Africans in an equitable and environmentally sustainable way. Non-motorized transport could

ITDP's AfriBike:

Non-Motorized Transport and the South African Entrepreneur

Don Lesotho is an active participant in South Africa's vibrant informal economy. He sells soup bones to residents of Soweto's burgeoning squatter settlements. Three times a week Lesotho crams into a 15-passenger mini taxi and heads into Johannesburg from his home in the Orlando section of Soweto. There he meets his supplier, a wholesale butcher who stocks Johannesburg's wealthy northern suburbs with prime cuts of beef. The butcher is all too happy to part with the bones and Lesotho is well aware that for most of his clientele, he will be providing the only meat in their diets.

To reach his customers, Lesotho loads his modified luggage carrier with as many bones as will fit, and pushes off for one of the four Soweto shanty towns where his clientele lives. The closest of these settlements lies three miles away. Having no choice but to walk, Lesotho can only sell as many bones per day as will fit on one cart. Driven both by a strong entrepreneurial spirit as well as by the need to provide for his extended family of eight, his dreams center around tapping into the potential of Soweto, South Africa's largest township and home to perhaps as many as three million people. Without an affordable means of transport for himself and his bones, Lesotho's market is restricted by the distance where his feet will carry him.

With a small pick-up truck being far beyond his means, Lesotho has thought about the possibility of purchasing a one-speed tricycle with front-load capacity of over 100 pounds. However, the \$400 price tag is beyond any amount he could hope to save. Getting a loan from the local satellite of the Small Business Development Corporation is a possibility, but he is hesitant, not wanting to be in debt, nor trustful of an outsider connected to the state who might ask for a cut from his earnings. Until he finds a way to improve his mobility, Lesotho is all too aware that his business will remain a subsistence activity.

Afribike, the Institute for Transportation and Development Policy's latest initiative in southern Africa, is working to promote bicycles as tools for development in South Africa. Together with South African Council of Hawkers and Informal Businesses (ACHIB) as well as other non governmental organizations, Afribike will work to create an urban-based center where street vendors will be able to acquire locally-made load-carrying bicycles or tricycles to help build their businesses in an affordable and environmentally sustainable way. The bikes will be made available through a lease-to-own arrangement enabling business women and men of the smallest scale to benefit from owning their own work bikes. The long term goals of the Afribike project are to promote land use and transportation policies that are equitable, environmentally sustainable and economically viable for all South Africans in the post-apartheid era.



Ice cream vendor

also be a critical element in a post-apartheid city which allows greater mobility for all of its citizens.

The State of Non-Motorized Transport in the New South Africa

Despite an amenable climate and terrain in most parts of the country, cycle use is extremely limited in South Africa. Except in urban centers where Black laborers occasionally use work-bikes to move goods, bicycles are mainly the domain of the affluent classes who use them for recreation. This is largely because of the long distances between work and home, the lack of proper facilities such as bike parking and bike lanes, lack of safety, and the dominant attitude which associates the bicycle with backwardness. Fear of having the bicycle stolen, high cost and lack of availability of credit to purchase the bicycle are also obstacles for lower income Blacks. Yet, many of these obstacles to greater non-motorized vehicle use in South Africa can be overcome through concerted efforts by both government planners and NGOs.

Foremost among the priorities for planners in post-apartheid South Africa will be the need to make the link between land use and transportation policy. Employment opportunities will need to be generated within the townships and large firms located near existing residential areas. Affordable housing will have to be made available to Blacks in central cities. Unsustainable low-density sprawl and urban fragmentation will have to be curtailed through land use controls. If these changes gradually take place, trip distances would decrease and walking and non-motorized vehicle use could become increasingly viable. In the meantime, non-motorized vehicles could play an increasingly important role not only in improving mobility within the townships and as a way of reaching train stations, but work-bikes could play a key role in facilitating small business development by street vendors both within the townships and in the central cities.

The instability of the South African economy has led to a drastic drop in formal sector employment, driving many people to seek jobs as petty traders selling goods and services on street corners, in backyards, or wherever customers can be

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DHAKA, BANGLADESH

Ban On Pedicabs and Street Hawkers Leads to Ouster of Ruling Party Mayor

In the name of 'modernization', the Mayor of Dhaka from the ruling Bangladesh National Party banned the use of tricycle rickshaws last year. Supposedly, the presence of poor trishaw drivers around expensive hotels where important foreign visitors were staying was embarrassing the government. Trishaws are the main form of transportation in Dhaka, and provide jobs for 300,000 people. At the same time, the government cleared the pavements of street-hawkers, depriving hundreds of thousands of others of the means of earning a living. Making the trishaw drivers and street vendors invisible, however, will not make them go away. In the first democratic elections for mayor ever in Bangladesh, the ruling party mayor was soundly defeated by the opposition Awami League, and both policies have been rescinded.

In another incident in Bangladesh, a young woman on her way to medical school in a rickshaw was killed by a truck driver. In the wake of the previous government actions, the killing set off a demonstration which nearly turned violent. In grief and outrage, students of the Salimullah Medical College Hospital and the Dental Medical College went on a rampage stoning trucks in their path. They formed a procession ending at the National Press Club. Here, they declared a strike in all of the nation's medical schools and demanded the immediate punishment of the truck driver. Their march was joined by other organizations in urging government authorities to ban the entry of trucks into the city during the daytime.

NEW YORK AND AMSTERDAM

Pedicab Businesses Inaugurated

While bicycle rickshaws are being banned in Dhaka and Jakarta because they are 'primitive,' new bicycle rickshaw businesses have sprung up all over the United States and Holland. There are around 50 small pedicab businesses in the U.S., and most of them are associat-

ed with beach boardwalks and tourist areas such as Harbor Place in Baltimore. The New York and Amsterdam initiatives are unique in that they plan to focus on more general transportation needs, not only in tourist areas. Just as motorcars can become more energy efficient, modern bicycle technology such as lighter metals and lower gearing has made human powered taxis more energy-efficient and hence easier to pedal.

The New York initiative, founded by local activist and non-motorized vehicle designer George Bliss, will be a cooperatively-owned private business called PONY (Pedicabs of New York). PONY will begin operation in May, 1994, providing human-powered taxi service between the East and West Village, Soho, Little Italy, connecting these areas to each other and to local subway stations. PONY is also planning a call-in service primarily for elderly and disabled people wishing to make several short trips within their neighborhood for shopping and other necessities that are inappropriate for the use of a motorized taxicab. PONY will also likely receive a permit to operate along the recently opened promenade along the Hudson River between Battery Park City and 14th Street. The new promenade promises to be an important link in the City's planned system of non-motorized bike-ways and 'greenways'. The human-powered taxi service will not only be a very convenient and enjoyable way of seeing the waterfront, it is also critical to making the area accessible particularly to elderly and disabled people.

Initially, the cost of the pedicab service will be \$0.50 per minute. If the pedicab is occupied half the time, this will give the driver \$15 per hour plus tips, a reasonable wage. This billing method has the advantage that the passenger can monitor the time themselves, while removing any incentive for the driver to speed. Most pedicab services catering primarily to tourists charge \$1.00 per minute, which price the service out of the range for basic transportation needs. The intent is that the pricing structure should be cheaper than a

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motorized cab for trips under 5 blocks, competitive with a cab for a trip between the East and West Village, and more expensive than a cab for longer trips.

PONY is a project of the Center for Appropriate Transport (CAT), a non-profit organization promoting human-powered and other low cost transportation technologies to meet the basic needs of community residents in New York City. ITDP is a member of CAT and a



Peter Weizler

Pedicabs, banned in Dhaka, are

technical advisor.

The new pedicab business in central Amsterdam has been launched by the students of the Haarlem Business School. The initial phase of the project used imported Indonesian becaks. They charged \$1.50 per kilometer, and received an average of 3 rides per hour. The pedicabs were faster than taxis for very short distances. Dutch television sponsored a race between a pedicab and a taxicab. Both vehicles were immediately ensnarled in traffic. The taxi won the race by a few seconds, but the taxi fare was double the fare of the pedicab.

Most of the pedalers complained that

Transportation Briefs

the Indonesian rickshaws were too heavy and clumsy. The business is looking for private investors or bank loans to finance phase two of the project. They plan to switch to new lightweight Dutch-made rickshaws. So far, most investors have been interested in the vehicles primarily for advertising and publicity purposes.

The introduction of the pedicab onto Amsterdam's streets is intended to cor-



taking the streets in New York.

respond with the municipal government's plan to drastically reduce motor vehicle traffic in the center city, which was approved by the citizens of Amsterdam in a local referendum by a wide margin in a recent election.

BOREL, HAITI

Mobility Haiti: Progress Against All Odds

The latest container shipment of bicycles, spare parts and tools cleared customs in Port Au Prince March of 1994, and all have safely arrived at the

Laboratwa Esperance. The Lab is a human-power assembly, maintenance, and research facility inaugurated last spring by ITDP's "Mobility Haiti" project in cooperation with the Hospital Albert Schweitzer and the Project Help Mission.

Recent correspondence from Haiti notes that despite the political turmoil, repair, fabrication, training, and maintenance work continues the Laboratwa Esperance. With the oil embargo now effectively in place, the carts, trailers and wheeled stretchers are proving essential to the Hospital Albert Schweitzer's daily operations. A working relationship with a supplier in the Dominican Republic has been established, and a local bicycle mechanic/manager has been hired to continue the bike mechanic training program. Income generated from sales and repairs at the Lab are able to pay the salaries of staff, and the costs of parts and materials.

The material assistance and technical training provided by ITDP, with the support of the Hospital Albert Schweitzer and Project Help, demonstrate that in a short time and with minimal funding, non-motorized transport can create jobs and benefits in poor communities.

ROXBURY, MASSACHUSETTS AND NEW YORK CITY

Bicycle Recycling Projects Take Off

In February, Bikes Not Bombs announced the grand opening celebration of its Bicycle Recycling and Youth Training Center, located in the Boston neighborhood of Roxbury. This represents a great leap forward in advancing their goal of promoting ecological, people-centered transportation alternatives in communities around the world. At the Center, members of the community will be able to repair bicycles, train young people in bicycle mechanics and maintain an office, and store bicycle related resource materials. Donated or recycled bicycles will also be prepared for shipment to Central America.

Bikes Not Bombs, the first ITDP ini-

tiative, began as a gesture by Americans opposed to U.S. trade policy towards Nicaragua. Setting up chapters across the country, Americans donated thousands of bicycles which were shipped to Nicaragua to local organizations in Managua and Leon. Bike shops were set up and today they are viable businesses that no longer depend on their American friends for support. While BNB maintains a strong connection with their Nicaraguan counterparts, it is now focusing on youth at home. Bikes Not Bombs, independent of ITDP since 1992, may now be contacted at their new address: 59 Amory Street, Room 103-A, Roxbury, MA 02119 Telephone (617) 442-0004.

Karen Overton has also set up the "Recycle a Bicycle Project" for Transportation Alternatives. The project, based in Washington Heights in New York City, will take recycled bicycles, which are on the Department of Sanitation's list of products difficult to dispose of, and will train people from the community how to refurbish the cycles for their own use and for resale. The project not only reduces the amount of garbage, it gives low income people job skills and an education about transportation and environment issues.

SARAWAK, BORNEO

Stop the Madness, Stop the Logging Roads

The construction of new roads into Borneo's rain forest has not only facilitated the continued deforestation there, but is also threatening the very survival of one of the last hunter-gatherer societies in the world, the Penan tribe. The majority of these people, numbering less than 8,000, have been placed in resettlement camps. To protect their culture and their environment, the Penan men, women and children have constructed wooden barricades and blocked the roads. For the Penan people, these new roads are destroying their culture.

While the roads do not seem to be being financed directly by Multilateral Development Bank (MDB) funds, MDB funding of other major highway links in

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The Philippines:

On the Road to Ruin?

By Brian Williams

The Philippines has been left behind in Southeast Asia's "Economic Miracle". Snarled traffic, choking diesel fumes from the ubiquitous jeepney and frequent power outages running three to four hours a day in Metro Manila have created an urban nightmare with no end in sight. With a per capita Gross Domestic Product of \$2,300 in 1990, the Philippines is among the poorest countries in the region. Thirty-eight percent of Manila residents live below the poverty line and forty percent live in squatter settlements. Meanwhile, local government policy, together with technical and financial assistance from the Japanese government, promotes building highways to ease congestion so the wealthiest ten percent of the population who can afford a car can breeze in and out of Manila's two business districts unencumbered by the squalor that surrounds them.

In an attempt to vault the country in to the realm of "Newly Industrialized Country" status, the Fidel Ramos administration has recently initiated its "Philippines-2000" program, including massive amounts of public and private financial investment in infrastructure development in the Transport Sector. The linchpin of the transport program is the Metro Manila Urban Expressway system, which is trumpeted as the final solution to the City's traffic woes. It consists of three circumferential and eleven radial expressways with selected upgrading of crucial feeder secondary highways. The total cost of the project is already slated to be over \$1 billion and will take five years to complete. Technical assistance for the required feasibility studies, environmental impact reviews and cost-benefit analyses are mainly provided by the Japanese International Cooperation Agency (JICA). Major funding for the projects are provided by the Japanese Overseas Economic Cooperation Fund, the World Bank and the Asian Development Bank.

While new highways in Manila may reduce congestion in the short-run, in the long-run they will increase the frequency and distance of trips made by rich and poor alike. For example, due to planned highway construction within the urban core, many squatter settlements will have to be relocated. As a result of part of the Manila South Tollway construction, an elevated express-



Pedicabs and horsecarts navigate floods in Manila.

way to be built over the existing Philippine National Railway-bed, 10,483 squatter families will be relocated to distant settlements in the periphery.

Not only will this massive expressway construction require relocation, it will also induce more costly low-density urban sprawl by ensuring wealthier suburban white-collar workers greater access to the inner core of the city in the short-term. It will also force those relocated to travel longer distances to traditional employment centers and force them to pay upwards of 30% of their already low incomes on transportation expenses.

Non-Motorized Transportation: Beating the High Costs of Imported Oil

While more highways are being constructed for use by motor vehicles, low-income Filipinos are turning to non-motorized transport. Because of the economic restructuring and currency devaluation imposed by the International Monetary Fund after the "People's Power" revolution which toppled the Marcos administration, the costs of imported oil soared. The resulting economic dislocation forced local residents to consider alternative modes of transportation less reliant on imported oil.

The non-motorized pedicab, which had all but disappeared by 1986, have returned in large numbers, providing convenient, non-polluting door-to-door service. According to a recent World Bank-sponsored study, non-motorized vehicle use is up to 33.7%

The Manila South Tollway will displace 10,483 families to the periphery.

of total trip-making in some parts of Metro-Manila. One additional non-motorized alternative being utilized is the use of animal-drawn carts. Not only are both of these modes more cost-effective and non-polluting, but they are also better able to navigate Manila's flooded streets during the monsoon season. Pedicabs are also used like small trucks, for short distance freight delivery within neighborhoods, particularly in Malate and Ermita. The resurgent pedicab industry has generated thousands of jobs for under-employed squatter residents.

In Metro Manila, the non-motorized transport sector has been so successful that it began to compete with private jeepney service, primarily for those requiring a change in travel mode along the way to complete their trip. As a result, under the Metro Manila Council Ordinance No. 6, pedicabs operating along highways and major thoroughfares within Manila were banned in 1990, ostensibly because of "congestion". This, despite the fact that pedicabs use half the road space of private cars, and surveys show that private motor vehicles are the major cause of congestion on Manila roads due to their sheer number (72% of all traffic during the morning peak period in twelve critical intersections). It is difficult to see how this more efficient and non-polluting mode of travel should be banned because of "congestion"!

Here in the U.S., we have learned that building more highways alone can never reduce traffic congestion, and only encourages greater use of polluting motor vehicles. Unless alternative modes of trans-

portation are encouraged and land use regulations are used to discourage sprawl, congestion and air-pollution will increase. This is particularly important in the Philippines as the latent demand for private automobiles would ultimately congest the entire network of planned roads under the "Philippines - 2000" program. As the gap between rich and poor Manila residents grows and as a growing upper-middle class begins to emerge, rates of private automobile ownership will increase. As was recently noted in the *Economist*, in neighboring Malaysia, "a 40% rise in incomes between 1987 and 1991 was

with the fastest growth rates in the World, China, has a transport sector dominated by non-motorized transport. In economically successful Japan, bicycle use is also increasing rapidly, particularly as a way of reaching commuter rail stations. Non-motorized vehicles expand the catchment area around mass-transit stations by some 35 times. Because pedicabs in Manila use less road space per person per lane per hour than private motor vehicles even with high occupancy, switching to this alternative actually could reduce congestion.

In the Philippines, the possibility of making non-motorized transportation part of a sustainable transportation solution still exists. Unlike Bangkok, the urban transport situation in Manila remains within the realm of a sustainable future, but the timing is critical. Adequate provision of slow moving vehicle lanes for non-motorized vehicles and dedicated public transit lanes must be implemented at the same time that road capacity is expanded. Manila's non-motorized trans-



Pedicab service in Manila providing access to commuter rail station

accompanied by a 290% rise in car sales". And Philippine government leaders need only travel to nearby Bangkok if they want to see the likely results of their current transportation plans.

The Role of Non-Motorized Transportation For Cost-Effective Mobility

While the use of pedicabs are often viewed by developing country governments as a symbol of their economic "backwardness", we are slowly learning that in reality, the opposite may be the case.

It may be no accident that the countries

port industry must be integrated and coexist with any publicly-subsidized highway project.

While roads are necessary for economic development, who uses the roads and at what price should be a matter of public discussion. In the absence of policies to reserve road space for non-motorized users and constrain the use of private motor vehicles, the Manila transportation system will increasingly serve only the needs of automobile-owning elites at the expense of the transport needs of the majority of the Filipinos. ♦

Will Bicycles Be Banned in Major Chinese Cities?

Big Highway Push Planned

by Walter Hook

China is the most bicycle-friendly country on earth. In its capital, Beijing, more than half of the people commute to their jobs by bicycle, and in Shanghai more than 40% bicycle to work. China also produces 40% of the world's bicycles, some 40 million a year. Despite having some of the most densely populous cities in the World, the bicycle has made Chinese cities quite pleasant to move around in. While there is considerable air pollution, most of it comes from industrial and residential use of low-grade coal, rather than from the transport sector. Imagine what the impact would be for the air in China, and for global warming, if the half a billion Chinese people currently using bicycles were to switch to motorcycles or private cars. But this is precisely what is happening.

For years, owning a bicycle in China was a privilege. Bicycles were subsidized and rationed to favored employees through the workplace, and only one person in four had a bicycle. As a result, the bicycle was seen as a high-status consumer good. It was a way of avoiding riding on the crowded buses. Couples going out on a date tend to ride on a single bicycle the way we would drive in a car in the U.S..

With the economic reforms, the use of the bicycle has exploded. As bicycle rationing came to an end, annual production of bicycles in China rose from under 10 million per year in 1980 to just under 40 million in 1990. In major cities bicycle congestion and chaotic bicycle parking has become a major problem.

This explosion in bicycle use has led to a reaction by government authorities. In Shanghai and Guangzhou (Canton) there are plans to ban bicycles on many of the main thoroughfares. Last year, Mayor Li Ziliu decided to solve the congestion problem of Guangzhou by banning bicycles and motorcycles from the downtown area.

The plan met with a huge outcry, as Chinese citizens appealed to the mayor to reconsider the bike ban and ban cars instead.

On top of this, bicycle parking fees are being increased and bicycle taxes are being imposed, all to discourage their increasing use.

Traffic in Shanghai is rapidly moving toward gridlock. But while increased bicycle use may be part of the problem, the main cause of growing congestion is the increasing number of cars and motorcycles

General Motors, Mazda, Ford, Mercedes are all working hard to break into the market. In Business Week, Ford Motor Company's Executive Vice-President is quoted as saying, "My #1 priority in 1994 is China." With the car market slumping in Western Europe, the U.S., and Japan, "the prospect of millions of potential Chinese drivers has auto executives around the world drooling."

China may be the only country in the world where bicycles are seen as part of the congestion problem, rather than part

of the solution. As a passenger on a bus filled to capacity uses about 1/3 of the road space that a bicyclist uses, part of the solution to China's growing congestion problem requires encouraging some long-distance bike commuters to switch back to the buses. For years, China underinvested in its bus systems, allowing them to deteriorate. And with cars and trucks sharing the road space with bikes and buses, the buses are slowing down, inducing more and more people to take their bicycles which are faster. While many municipal officials are increasing restrictions on bicycle traffic, restrictions on motor vehicles



George Bliss

Are bicycles really causing the congestion problem, or are cars?

on the road. There are still only 1.2 million motor vehicles in China, and only about 100,000 private cars, or about one for every 10,000 people. Most of the motor vehicle fleet is trucks, taxis, and cars owned by public and private companies. Nevertheless, the number of private cars on the road is increasing at an alarming rate. Annual car production and sales, currently at around 400,000 per year, are expected to quadruple by the year 2000 to nearly 1.6 million vehicles annually. Motorcycle use could grow even faster.

Volkswagen, Daihatsu, Peugeot, and Chrysler Jeep working in joint-venture with Chinese firms control 76% of the Chinese motor vehicle market, and

are being relaxed in some cities, leading to a virtual explosion of automobile and motorcycle traffic. Yet every extra car on the road takes up as much road space as 12 bicycles and as much parking space as at least 20 bicycles.

Several factors have led to the popularity of the bicycle in China. First, bicycles are affordable. With average incomes currently around \$350.00 per year, many other forms of transportation are unaffordable. Only one person in 10,000 can afford a private car in China. Secondly, Chinese cities are flat, and urban planning has been used to create a safe and pleasant cycling environment. One third of the

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the area is indirectly responsible for the deforestation and destruction of the Penan culture. What typically seems to happen is that the MDBs negotiate with the borrowing countries like Malaysia and Indonesia for a network of new or improved roads. The MDBs then let the governments know which roads would pass an MDB Environmental Impact Assessment (EIA), and which would raise international concerns. The Banks then agree to fund only those less environmentally controversial links in the proposed network.

The net effect, however, is that the MDB loans underwrite the construction of the whole network, as government funds can now be concentrated on the more environmentally sensitive sections of the road link, while MDB funds tend to be concentrated on the less controversial links. The only way this problem could be avoided would be if MDB loans were made conditional on the EIA of the entire planned road network, not just on specific links.

For more information, contact the Rainforest Awareness Project, 2611 Delwood Avenue, Durango, CO 81301.

NAUSORI, FIJI

Bikes Bolster Business

Bikes are good business in Fiji these days. Two companies, LEANJAC and WITHJAC, have been formed by youth to venture into the world of business. The former is run by students from Lelean Memorial School while WITHJAC is run by the Junior Achievement Company made up of 30 unemployed youth. In November of 1993, they received a container of 150 bicycles from the New Jersey-based organization, Pedals for Progress. Proven as a viable undertaking, these young adults have requested another shipment to distribute this Spring.

Pedals for Progress, initiated by returned Peace Corps volunteer David Schweidenback, is dedicated to providing bikes to the working poor in coun-

tries around the globe. At home, bikes go to a variety of youth organizations. While this effort provides mobility to people who otherwise could not afford it, the project also keeps bikes from US landfills. Pedals for Progress began its work with the ITDP in 1991 as it awaited its own non-profit status. For more information, contact David at 86 East Main Street, High Bridge, NJ 08829.

WASHINGTON, D.C.

Clinton Administration Proposes End to Public Transit Operating Subsidies: Nationwide Fare Hikes Possible

The Clinton Administration's Office of Management and Budget Director Leon Panetta was originally proposing to phase out operating subsidies to public transportation over the next three years. Such a plan would have cut \$202 million dollars in Federal assistance to mass transit operations. The move would have led to increasing public transportation fares around the country, and probably further loss of ridership. Given the enormous annual subsidies to private motor vehicle transport, estimated at \$2,500 per passenger car per year, this penny-wise pound-foolish policy can only further lock us into an economically and environmentally damaging dependence on the automobile. The Campaign for New Transportation Priorities, the American Public Transit Association, and other groups are fighting the plan. The Senate and House subcommittees restored all but \$2 million of the cuts, but it could be cut again by the Appropriations Committee or when the full Congress votes on the budget.

INDIA

India Decides to Invest in Upgrading the Cycle Rickshaw

While the traditional cycle-rickshaw has done good service for more than 5 million rickshaw drivers, some 7% of India's workforce, they also have their disadvantages. They are heavy, use outmoded designs and materials, and are not designed with the maximum comfort of the driver or the passenger in mind. Rickshaw cyclists often suffer from work-related back and leg prob-

lems, and complain of the excessive strain. Safety is also a concern. Rickshaw drivers average at least one minor accident per working day. A new study blames design flaws. Weak brakes account for 25 percent of collisions, according to the study; 17 percent occur because of skidding while turning a corner, and 15 percent involve passengers being thrown out of their seats when the driver applies the brakes.

The Indian government has finally decided to invest in upgrading the cycle rickshaw. It is time, government engineers say, to design a better cycle rickshaw. The research of dozens of individual Indian and foreign innovators and research institutes will be collected in a coordinated effort to build a vehicle that is both safer and easier to pedal.

BANGKOK UPDATE

Congestion Driving People Mad

Traffic congestion in Bangkok is so bad that businesses and high income residents are buying apartments in the central city in order to reduce the distance they need to commute. As a result, land prices in Bangkok have skyrocketed, from \$500/ sq. meter in 1986 to \$4000/sq. meter today. This pressure to develop central city land, along with the rapid expansion of the road network, is leading to the displacement of low income squatters currently occupying the land.

The displacement of squatters is leading to a serious problem of homelessness. According to Soomsook Boonyabancha, the Asian representative of the Habitat International Coalition, 1.2 million people are threatened with eviction in Bangkok, and over 20,000 were evicted last year alone.

Traffic congestion in Bangkok is literally driving people crazy. At a terminal congested intersection in Bangkok, a traffic cop cracked under the pressure of trying to direct the never-ending flow of cars. He switched all traffic lights to green simultaneously and danced gaily amid the ensuing chaos. At a local psychiatric hospital he was diagnosed as suffering from an unspecified "mental illness." ♦

Letter

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for public transportation, or over-investment into roads and highways and motor vehicle manufacturing facilities has played in the current environmental degradation.

The transportation provisions of Agenda 21, (one of the two agreements signed at the Rio Earth Summit), are primarily under the human settlements section, which means that policy reform and new U.N. support for sustainable transportation projects is likely to come from the United Nations Commission on Human Settlements (HABITAT) and its NGO forums. Planning for the next international meeting of the United Nations Commission on Human Settlements (HABITAT) in Istanbul in 1996 is already underway, and ITDP has been participating in these meetings in order to ensure that environmentally sustainable transportation policy be high on the agenda.

In the next year, ITDP will be focusing most of its policy energy on reforming MDB lending in East and Central Europe and East Asia. It is these two parts of the world where automobile use is growing the fastest, over 10% per year in some countries. Meanwhile, these areas have traditions of non-motorized transportation and public transit use which can be built upon. The environmental implications of this explosion in automobile use has prompted us to seek common cause with environmentalists and other activists in these regions.

It is fair to ask what business we, as Americans, have telling people in Eastern Europe and developing countries how to set up their transportation systems when our country is hardly a model of environmental sustainability and equity. Most of us at ITDP are also working hard on reforming the U.S. transportation system, although usually wearing different hats. We know the problems associated with automobile dependence better than anyone. But more than this, as Americans we have influence over how the MDBs spend their money. Billions of dollars of U.S. money is going to new highway and motor vehicle manufacturing facilities in these countries. MDB financing is leveraging billions more in private equity investment. Furthermore, most of the new

Eastern Europe

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transport modes, the likely result will be the decimation of rail and public transport in favor of private motor carriers and private cars.

Even more alarming is the number of International Finance Corporation (IFC, the private sector-lending arm of the World Bank), EIB, and EBRD investments into motor vehicle manufacturing facilities. The EBRD is planning to finance \$100 million of a car plant in Uzbekistan, and is probably going to co-finance with the IFC the VW-Skoda plant in the Czech Republic. Its largest loan to Hungary to date is a \$65 million loan to a joint venture with General Motors. Audi-VW and Suzuki just invested in major plants in Hungary, and Fiat in Poland, although the extent of EBRD involvement is unknown.

These massive investments into the motor vehicle manufacturing industry are the best way to ensure that the countries of Eastern Europe will develop

powerful vested interests pushing for the unlimited expansion of new highway capacity, with disastrous effects on the global environment.

There is no mystery as to why this is occurring. Car sales in the U.S., Western Europe, and even Japan are stagnating. U.S. auto manufacturers are dreaming of making billions of dollars on the largely untapped Eastern European market. The poor quality Eastern European cars are unlikely to pose any serious competition to American, Japanese, and Western European car manufacturers.

Pent up demand for private cars in Eastern Europe is inevitably going to lead to a rapid increase in auto use in the medium term. But unless Eastern European environmentalists, bicyclists, urban planners, and other progressives mobilize now to work towards a more environmentally sustainable transportation future, the environmental improvements in other sectors resulting from the political changes in 1989 will be invisible behind a cloud of car exhaust. ♦

vehicle production facilities in Eastern and Central Europe are joint ventures with U.S. automobile manufacturers. For this reason, as U.S. citizens, we have a responsibility to do what we can to encourage more environmentally sustainable and equitable transportation policies in these countries. ♦

Walter Hook and Brian Williams

ITDP

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South Africa

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found. Well aware of the employment crisis in the country and anxious to maintain control over the political economy, the government has turned a blind eye toward informal activity and in some cases has even encouraged it. For many small entrepreneurs in South Africa, at least half of whom are women, the potential to turn these micro-enterprises into viable businesses has been hindered by the inability to easily move their wares to marketplaces; to strategic sites such as transit hubs; or directly to customers. For many, this obstacle could be overcome by the use of a low cost bicycle or tricycle. (See "Non-Motorized Transport and the South African Entrepreneur")

However, the use of bicycles, work-bikes and other non-motorized vehicles has been hurt by the collapse of the South African bicycle industry. Once a robust industry exporting bicycles all over Southern Africa, the South African bicycle industry has been reduced to a single utility cycle factory functioning only part-time. It was nearly destroyed by the economic disruptions related with the politi-

cal turmoil and competition from low cost Chinese and Indian imports. If the bicycle industry is to rebuild itself, government support may be required. Since bicycle manufacturing is labor-intensive, rescuing the bicycle industry would also help gen-



This woman's recycling business would be more profitable if she had a dumptrike or a hand truck.

erate much needed employment. Subsidies, tax breaks, or loans from Multilateral Development Banks could be used to bring in the most modern bicycle manufacturing technology, making the price of a bicycle manufactured in South Africa competitive with imports and affordable to the average South African. The total cost of such assistance would be minimal next to the high price already paid in other transport subsidies. Additional measures including public education and the building of a cycle-friendly infrastructure will be necessary to maximize safety for cyclists.

The problems faced by the new government to forge national unity will be formidable. Apartheid's effects will be felt long after the term has fallen from public use, especially regarding the excessive distances that South Africans will be forced to travel in order to find economic livelihood. It is likely that the poor will be the last to benefit from new policies enacted to redress apartheid's effects. Transportation and land use policies that emphasize the potential of non-motorized transport will increase the mobility of all South Africans while having the least economic and environmental costs. ♦

Women Take Back Streets

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In some cases, women who cycled did so to reduce the time needed to make trips to their machamba (small plots of farm land). In Mozambique, the majority of women are responsible for feeding the family based on their subsistence farming. This work is unpaid activity and only occasionally can a surplus be generated and sold in a local market. In this instance, cycling does not translate directly into monetary benefits. However, on the average women saved 28 hours per month. Rather than spending their time on arduous head-loading and walking, the extra time was dedicated to activities such as farming, child-care, and domestic chores which contribute to the improvement in the quality of life.

In Africa, women are responsible for the majority of goods movement. Currently, Mozambican women spend over 4 hours a day, and as much as 1648

hours a year, walking to their fields and carrying things, while men on average spend only some 531 hours a year involved in basic transport. Their most common trips include fetching fuel and water, making trips to their small plots of land and to the market place, and accessing social services. With a majority of the population in most African countries unable to afford access to a motor vehicle, most of this travel is done on by women on foot, carrying objects on their heads. The World Bank's approach to economic development in the transport sector, such as paving new highways, will do little to address the basic mobility needs of the majority of the African population. Only by directly addressing the basic mobility needs of women who bear most of the transport burden will economic development in Africa be achieved.

The bicycle and other non-motorized

vehicles, as demonstrated by the "Bikes for Africa" and other projects, have the potential to help address this problem. While significant cultural obstacles to the use of bicycles by women exist and must be addressed, they have not proven to be insurmountable.

Overcoming the obstacles to women's mobility in Africa requires working closely with African women's organizations who are sensitive to the local culture. Women's groups can advocate for the acceptance of non-motorized vehicle use by women within the family and community structure, and can mitigate against the likely backlash by men against women's empowerment. By working with local women's groups, making bicycles available at moderate cost with low-cost credit, and linking bicycle use to income-generating activities or critical community needs, lack of basic mobility, one of the key obstacles to women's economic empowerment in Africa, can be overcome. ♦



NEW TITLES

The Bicycle Advocacy Resource Guide. Edited by Ron Goodman of People Power and the Bicycle Federation of America. 1993. pp. 154. \$10. To order, write the Bicycle Federation of America, 1506 21st St. NW, Suite 200, Washington DC, 20036.

The Bicycle in Africa: Luxury or Necessity? By John Howe and Ron Dennis. IHE Working Paper IP-3. September 1993. pp. 28. To order, write IHE Delft, PO Box 3015, 2601 DA Delft, The Netherlands.

The Costs of the Car: A Preliminary Study of the Environmental and Social Costs Associated with Private Car Use in Ontario. By Pollution Probe. 1991. pp. 70. To order, write Pollution Probe, 12 Madison Avenue, Toronto, Ontario M5R 2S1.

"Congestion Management and Air Quality: Lessons from Bangkok and Mexico City" in the Asian Journal of Environmental Management. By Setty Pendakur. 1993. To order, write ITDP, 611 Broadway Rm 616, New York, NY 10012.

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International Symposium on Non-Motorized Transportation, Beijing, China, May 23 – 25, 1994. Beijing Polytechnic University. In English and Chinese. For more information or to register, call L.David Shen, Dept. of Civil Engineering, Florida International University, The State University of Florida at Miami, Miami, FL 33199, Tel:305-348-3055, Fax: 305-348-2802.

Land Use, Lifestyle, and Transport, A Transatlantic Collaboration on Transportation, Land Use, and Air Quality, Sponsored by the Center for Clean Air Policy and the University of Kassel, Germany. University of Kassel, Kassel, Germany, May 25 – 27, 1994. For more information, contact the Center for Clean Air Policy, 444 North Capitol St., Suite 502, Washington, D.C. 20001, 202-624-7709, Fax: 202-508-3289.

International Seminar on Gender, Urbanization and Environment. June 13 – 16, 1994. Nairobi, Kenya. Contact Diana Lee Smith at The Mazingira Institute. PO Box 14564.

Nairobi, Kenya. Telephone 254-2-443219.

Global Forum '94: Cities and Sustainable Development. June 24 – July 3, 1994. Contact Global Forum '94 at Eastgate Castle Street, Castlefield, Manchester M3 4LZ, UK. Telephone 44-61-234-3741.

International Human Powered Vehicle Championships. August 1 - 7, 1994. Eureka, California. Showcase of technological innovations ranging from utilitarian load hauling quadricycles to aerodynamic speed bicycles. Competition, symposium and trade show for air, land, water, and all terrain human powered vehicles. Contact the IHPVA at PO Box 51255, Indianapolis, IN 46251-0255. (Annual membership \$25)

Pro Bike Conference. September 6 – 10, 1994. Portland, Oregon. Contact the Bicycle Federation of America at 1818 R St., NW Washington, DC 20009.



China

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road space has been preserved for bicycles and another third for pedestrians. Sycamore and other trees were also planted along the bikeways to shade and protect cyclists from sun, wind, and light rain.

Even a significant amount of goods movement in China is handled by bicycle, particularly for farmers selling their goods in the free markets and for the newly emergent small private businesses which had trouble gaining access to trucks, fuel oil, and parking. Work bicycles make a lot of sense in extremely dense urban areas, as they take up less road space for movement and parking, and generate no pollution. While heavy loads often make for hard work, it is not inevitable that modernization need take the form of motorized trucks. With recent developments in non-motorized transportation technology, low cost work bikes can be made to carry enormous loads while still being easy to pedal.

If Chinese cities hope to solve their congestion problems, they are going to have to restrict the use of private cars and motorcycles from interfering with the buses. Banning private cars and motorcycles on most major streets in central Chinese cities, creating a network of roads

shared between bus and bicycle, is the only hope. Separating bike traffic from motor vehicle traffic is also important wherever separate bike lanes don't already exist. In this way, the travel speeds of buses could be increased, and many of the bus passengers who switched to bicycle could be attracted back to the public transit system.

Instead of focusing on these solutions to China's increasing gridlock, some staff members of the World Bank, the Asian Development Bank (ADB), and Japanese bi-lateral aid agencies have been encouraging banning the bicycle on major thoroughfares. MDBs are also financing the rapid expansion of highway infrastructure. Between 1988 and 1992, China built 505 Km of expressways. To their credit, some of the Bank-financed highway projects will include bicycle lanes. Today China has a network of 1300 kilometers of expressway, but already 2000 kilometers more are under construction. There are plans to construct another 15,200 kilometers by the year 2000. Most of this new construction has been financed by low interest loans from the World Bank, the Asian Development Bank, and Japan's Overseas Economic Cooperation Fund worth over \$1.7 billion. Major ring-roads are being build around Shanghai and Guangzhou with World Bank and ADB

funds, displacing many homes and small businesses.

This rapid increase in the number of motor vehicles has begun to scare non-motorized vehicle users off some streets. In 1992 alone 58,729 people were killed by motor vehicles, a death rate per vehicle 30 times as high as in most developed countries. In other words, the .1% of the population wealthy enough to own a car in China is literally driving the majority of the population who are bicyclists or pedestrians from public streets with the threat of physical violence.

This policy of accommodating the automobile while restricting the use of bicycles and other non-motorized vehicles doesn't make any sense here in the U.S., but it makes even less sense in China. With China's population density they will reach complete gridlock on their roadways much faster than here in the U.S. If the same percentage of people in China drove automobiles as drive them here in the U.S., they would have to pave over 40% of their arable farmland for new highways in order to accommodate them. Obviously, China will reach the limits of the feasibility of automobile culture much faster than other countries. But much damage can be done in the meanwhile. The global environmental implications of an automobile-dependent China are truly terrifying. ◆



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