

## Module E. Step by step check list for the planning, design and implementation of a bike project

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Note: This check list should be read in conjunction with earlier sub-modules discussing bicycle feasibility studies, selection and responsibilities of consultants etc. as these contain additional information needed to successfully design and implement a bicycle pilot project.

### A. Making bicycles affordable and available: procurement of bicycles

Bicycle procurement is the first and perhaps most important stumbling block for bicycle pilot projects. The major lesson from the failed World Bank Bicycle Pilot Project in Beira, Mozambique (also see sub-module H Case studies) is that a variety of individuals at the involved government agencies and participating non-profit institutions must be sufficiently committed to the project to be willing to struggle through the involved bureaucratic hurdles of procuring the appropriate cycles for distribution to the target population. Without this commitment, the pilot will be subject to long delays and will not be completed within the planned duration of the likely to not get off the ground for timely completion within the planned scheduled of the overall project.

#### Choosing the right bicycles

- Ask the intended project beneficiaries, especially women, about their preferences before the tender goes out!
  - People may have very specific preferences about added accessories, especially back or front racks.
  - Sometimes the acceptability of women riding bicycles is heightened if they are 'special bicycles' for women. (This may simply mean choosing drop-cross bars and feminine colors, as was the case for a recent bicycle project in South Africa.)
  - In other cases, only one particular type of bicycle sells well. (For example, the sales records of a bicycle assembler in Managua, Nicaragua show that standard frame mountain bikes are the only bikes with a significant market share.)
- Make sure the delivered bicycles are compatible with models and spare parts available in the project region
- Make sure the bicycles are of durable quality, especially if the bicycles are intended for rural use. Low-cost, low quality bicycles will quickly become unusable in rough outdoor conditions, and/or repair costs will prohibit further use of the bicycles
  - Chose fat-tire bicycles for rough terrain.
  - Be aware that lowest-cost single-gear bicycles are unsuitable for hilly or mountainous terrain. However, new single speed mountain bikes are likely to be able to combine the advantages of easy technology and low cost with a high-end, modern image.
- Consider the additional procurement of safety accessories such as reflectors, lights and helmets, especially for urban use.

#### The tender process

- Make sure the tender process is open and a variety of potential suppliers are asked to submit offers.
- India, China and Taiwan are the largest, and most cost

competitive bicycle-exporting countries. If the project country has its own local/national bicycle industry, consider the added advantages of supporting this in-country infrastructure compared to pure cost-considerations.

- Consider the possibility or even necessity of in-country assembly of completely-knocked-down (CKD) bicycles in the procurement process.

### **Institutional responsibilities**

- Make sure the government agency responsible for organizing the tender is firmly committed to the pilot project
- Make sure the bicycles supplied through the tender actually conform with the specifications in the procurement documents. (In both the World Bank Pilot project in Lima and the Beira project lower-quality bicycles were offered by the suppliers.)
- Set a deadline for the timely completion of the procurement process
- Encourage close cooperation between the government agency and the NGO partners in the project

### **Credit schemes**

#### Revolving credit schemes

- These work well especially in rural communities
- Try to find a community development group that has experience in revolving credit schemes for livestock and other items.
- In any case, get a local community development group involved to implement the scheme.

### **Employer's saving schemes**

- This is a good idea if the bicycles are to be used as commuting vehicles, as was the case in the Lima pilot project
- Make sure to get specific employers committed to the project, preferably the ones whose workers would benefit from improved bicycle access.

### **Promoting the credit scheme**

- Make sure people know about the credit scheme. Otherwise even the best concept is useless. Active promotion of the scheme is key to success. This means:
  - reserve funds to advertise the scheme
  - make the partner government agency responsible for finding a promoting agency
  - make sure the promoting agency does active advertising of the project in local media, neighborhood assemblies, at local events, etc.
  - set target quotas for the number of sign ups for specific time periods

## **B. Providing bicycle infrastructure (especially for urban pilot projects): from pre-**

## feasibility to bicycle master plan

### Deciding the scope of the infrastructure

- Note that the need for specific bicycle infrastructures in large part depends of the size of the project area. Rural areas and small towns will require less segregation of traffic than large urban areas.
- Strongly encourage the completion of at least a pre-feasibility study for a bicycle master plan in the case of urban projects, even if there are no or only very limited plans for the construction of new cycling infrastructure.

### Envisioning a cycling network

- Ensure that any construction of new infrastructure is guided by a larger vision or program.
- Consider pilot bike lane lanes according to the following aspects:
  - Providing access to peri-urban employment districts. In order to target women, consider singling out light industrial districts with strongly gendered labor pools such as maquiladora plants in Latin America or garment districts in Asian.
  - University areas: students often make up a majority of bicycle users
  - Providing safe routes to school: this has been an important focus of bicycle education programs in Nicaragua, for example. Both boys and girls ride to school by bicycle.
- Note that Dutch cycle network planners consider the following five program requirements to cover all requirements of a potential cyclist (CROW 1994):
  - Coherence: The infrastructure must form a coherent unit
  - Directness: Keep detours to a minimum
  - Attractiveness: Make the surroundings as pleasant as possible
  - Safety: Guarantee the safety of the cyclists and other road users
  - Comfort: Avoid obstructions, delays, and bottlenecks

## C. Cycleways

### Road shoulders

- Consider the widening of shoulders along rural roads or peri-urban access roads so that they can be safely used for non-motorized transport
- Include such wide-shoulder specifications in new construction elements of the larger transport project to be implemented. This can be a simple and cost-effective way to promote cycling.

### Non-segregated cycle lanes

- Consider just marking off space for bicycles along urban roadways, especially if funds are limited and traffic volumes are not too high

- Note that these are less safe for cyclists
- The use of non-segregated lanes will often require the organization of public awareness campaigns to develop respect for the rights of cyclists.

### **Segregated cycle ways**

- This is more expensive, but safer for users
- Note that this requires a more extensive technical involvement of engineers
- Simple curbs may help to keep motorists from invading cyclists' space
- Make sure the lanes are planned wide enough for potential tricycle users. The Lima pilot bike lane suffered from this problem.

## **D. Additional physical infrastructures and services**

### **Park and ride facilities**

- Provide adequate bicycle parking at public transit terminals and key stations
- Consider employing women as parking guards
- Make sure these stations are readily accessible for bicycles. For example, avoid locating exclusive bus or tramways in the middle of major intersections.

### **Employer parking**

- Talk directly to employers about providing bicycle parking near their firms.
- Bicycle access may be particularly important to industrial districts. Women often walk for long distance to jobs in garment and other textile factories. Bicycle access could greatly alleviate their transport burdens.

### **Protection from theft and harassment**

- Consider bicycle registration schemes. Registration numbers would be imprinted into the frame and a corresponding certificate would be handed over at the time of purchase. Riders would have to carry it like a license.
- But: make sure it is not the police who is doing the harassment, constantly stopping riders at random to collect fines. (This happened in Leon, Nicaragua).
- Provide disincentives against harassment, especially to protect women riders.
- Consider lighting for dark stretches of the bicycle path.

## **E. Supplementary programs: municipal non-motorized transport programs**

- Ensure that there is at least one representative in the local government who actively promotes the increased use of non-motorized transport.
- Preferably include the creation of a special non-motorized transport program at the respective government agency.

- Consider the pros and cons of locating this representative or program in the transport planning office versus the local planning office (mayor's office).
- Ensure sustained funding for this element beyond the duration of the loan period.

### **Repair and maintenance facilities**

- Encourage the location of such facilities around bicycle parking facilities

### **Training programs in repair and maintenance**

- Encourage training programs in repair and maintenance in communities and at schools and universities
- Consider holding female-only workshops to encourage female participation.
- If female attendance at the workshops is low, follow-up and do additional outreach to recruit women for the training sessions
- Involving female role-models such as teachers or nurses can be an effective way to encourage other women to participate.
- The video "Riding out of poverty" (produced by the World Bank Gender and Transport Thematic Group in cooperation with AFRICBIKE illustrates how this training was organized in South Africa.

### **Training programs in riding skills**

- Since the lack of riding skills is often a first obstacles to biking, especially for many women, free initial training sessions should be provided. Depending on project setup, these could be carried out
  - directly in the neighborhoods targeted for improved access
  - around the areas of employment targeted for improved access
  - in schools and universities
- Consider holding female-only workshops to encourage female participation.
- If female attendance at the workshops is low, follow-up and do additional outreach to recruit women for the training sessions.
- Involving female role-models such as teachers or nurses can be an effective way to encourage other women to participate.

### **Traffic safety education**

- Provide traffic safety education to bicyclists, preferably at schools and at the riding skills workshops
- Include cyclist awareness training in driver's education modules required for obtaining licenses.
- Include a traffic safety education module for the general public. This could be co-organized by the Ministries of Transportation and Education. It should include radio messages and other advertising.

### **Additional Gender Training**

- Make sure that the entire bicycle promotion reaches both men and women. In most environments, women constitute a minority of bicyclists, while their mobility needs can often very effectively be met by improved access to non-motorized transportation.
- Consider having a gender specialist involved throughout the entire project cycle and make sure that the recommendations and comments this specialist provides are distributed and adequately considered by all project participants
- Especially in environments where female ridership is low, provide special gender awareness workshops early on in the project cycle.

### **References and resources**

C.R.O.W (Centre for Research and Contract Standardization). 1994. *Sign up for the Bike: Design Manual for a Cycle-Friendly Infrastructure*. Ede. The Netherlands.

Daggers, Ton and Patricia Lindo. 1996. *Cycling Promotion and Bicycle Theft: Local Background Study Leon, Nicaragua*. Utrecht, the Netherlands: I-ce Interface for Cycling Expertise. (Consultant report)

World Bank Gender and Transport Thematic Group. *Riding Out of Poverty* (video)