Rural Travel and Transport Program (RTTP)
National Rural Infrastructure Project (NRIP)
Senegal

The Promotion of Intermediate Means of Transport through a South-South Cooperation

Phase One
REPORT of Mission

Submitted by:

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Appendices:

a) Persons met on mission  
b) Draft specifications of an appropriate bicycle for use rural Senegal  

Attached as PDF:

c) Fax from George Handane, Director of ISENCY  
d) Proposal from Layif: "Strategie de Commercialisation des Velos Sudafricains"  
e) Photos of Mission

Introduction

The goal of the project is to improve access to basic social services and markets in rural Senegal through improving access to bicycles (also referred to as intermediate modes of transportation, or IMT) and related skills training and services.

The mission, undertaken as Phase I of the project, consisted of three representatives from Afribike, Paul S. White, Gustav Erlank, Frankie Luzolo, all of whom worked under the supervision and advisement of Chiekh Amadou Bamba THIOYE, RTTP Coordinator; and Moussa Camara Lo, PNIR Coordinator.

After briefly reviewing the objectives of the mission, the following report chronicles the activities of the mission, states the degree to which the objectives of the mission were completed, and provides recommendations for the next phases of the project.

Mission Objectives

As outlined in the December 1999 funding request, the three components of the project are to:

- Create a base for IMT promotion in Senegal via a south-south partnership;
- Analyze the rural transport situation in rural Senegal, identifying the barriers to increased IMT usage;
- Promote access to IMT, particularly among women in rural communities, via a pilot project.

The mission endeavored to complete the phase I objectives outlined in the Terms of Reference:

1) Establish a basis for IMT promotion in Senegal;  
2) Identify the specific barriers to increased IMT usage;  
3) Gauge the potential for increased IMT usage;  
4) Map medium and long-term strategies to increase IMT usage.
I. REVIEW OF MISSION ACTIVITIES

1. National Stakeholders (Dakar)

Seeking to both appraise national government and agency stakeholders of project aims and gain their approval and advice, on February 1 the mission, accompanied by Amadou Bamba THIOYE and Moussa Camara Lo met with Demba Diaw, Director of the Ministry of Equipment and Terrestrial Transport; Oumar Sileye Ba, Director of the Ministry of Decentralisation; and Mamadou Moustapha Mbengue, Director of the Ministry of Agriculture. In each meeting the mission was well received, gaining full approval and support of the mission's aims to improve the provision of IMT in rural areas, particularly among women. In addition to providing their full support of the project, they encouraged the mission to maximize its time in the field in order to gain a first-hand account of the transport problems facing rural communities. The Ministries were also unanimous in their approval of the South-South partnership between Afribike and project partners within Senegal.

After receiving the formal support of the relevant government agencies, the mission met with Aly Lo, the President of the Association des Presidents de Conseil Rural (APCR). In addition to providing the mission with information about the imminent field trips to rural areas in which the APCR is active, Aly Lo and his APCR colleague, Abdou Aziz YADE, committed APCR’s support to secure tariff and tax abatements for future Afribike hardware shipments that target rural beneficiaries.

2. ISENCY (Kaolack)

The mission's fieldwork began with a trip to Kaolack to meet with George Handane, the Director of ISENCY, Senegal’s sole manufacturer/assembler of bicycles. As such, ISENCY was identified as a major private sector stakeholder in any project seeking to improve access to bicycles. ISENCY (Industrie Senegalaise Du Cycle) was founded in 1977 as a French-owned enterprise but ownership was transferred to Senegal in 1990. This transition coincided with a rescinding of the tax breaks that at its inception helped ISENCY establish itself in an underdeveloped rural area (as part of a program to foster private sector development in Kaolack). The removal of these tax abatements resulted in an increase in the cost of an ISENCY bicycle to the public. In addition to bicycles, ISENCY imports and assembles Peugeot and Ramzey (Turkish) motorbikes.

According to Mr. Handane, the bicycle is far from reaching its full potential in Senegal. Current bicycle use is concentrated in eastern Senegal, where most of ISENCY’s 3,000 per annum bicycles are sold. Mr. Handane attributed the demand for bicycles in the eastern parts of Senegal to the firmer types of soil found there, which are better suited to the types of bicycles that ISENCY produces. (thin-tyred ‘racer’ bicycles) He also cited the 'tradition' of cycling in the region.

ISENCY’s highest annual production was 5,000 units, which occurred in the late 1980’s. Sales have remained around the 3,000 unit per year level for the last several years. Tubing for ISENCY bicycle frames is imported from India, from which frames are fabricated on-site at ISENCY. Frames are fitted with componentry imported from both France and India. Wheels for the bikes are also assembled at ISENCY, with imported components again from France and India.
Mr. Handane indicated that ISENCY bicycles are sold wholesale for about 65,000 CFA ($105) to retailers who sell them to the public for about 70,000 – 80,000 CFA. ($112 - $130) These figures indicate a retail mark-up of about 9% - 19%, a very low margin but typical of bike retailers throughout the world.

Mr. Handane conceded that the cost of an ISENCY bicycle is expensive compared to virtually identical models sold elsewhere in the world, which can retail for as little as $40 - $50. In Guinea, for instance, the cost of a one-speed racer virtually identical to the ISENCY bicycle retails for about 110,000 – 120,000 GF ($63 - $69). Mr. Handane, both in person and in written fax (see appendix C) outlined some of the regressive tariff and tax policies that significantly increase the cost of a bicycle in Senegal.

According to Mr. Handane, people prefer mountain bikes because 1) fat tires are more appropriate for sandy roads, and 2) mountain bikes are perceived as being higher quality and conferring higher status to the user. When asked why he did not sell mountain bicycles, Mr. Handane said that he 1) has never established contact with mountain bike manufacturers in China and Taiwan, and 2) his factory is geared to assemble non-mountain bikes, and 3) mountain bikes are more expensive.

Mr. Handane, after riding the single-speed mountain bike that the mission brought to ISENCY as an example of a type of bicycle better suited to rural Senegal, asked the mission if we could help him place an order for a container of such bicycles.

3. OSDIL, C.I.V.D. (Paos Koto/Kaba Koto)

After meeting with Mr. Handane at ISENCY, the mission continued on to Paos Koto, a rural community consisting of approximately 120 small villages. First the mission met with Mor Kare NDIAYE, Principal Secretary of Administration, Paos Koto; Lamine NDIAYE, Chief of the Regional Division of Public Works, Kaolack; Madou Thiem, director of C.I.V.D (Community Village Development), based in Paos Koto; and representatives from a locally based NGO, OSDIL (Senegal Organization for the Development of Local Initiatives).

The meeting began with a discussion of the transport crisis facing the 120 villages of Paos Koto, the residents of which struggle to access the 2 health care centers and 19 schools located in the area. Other popular destinations that were cited as difficult for residents to reach included markets, administrative centers and main roads.

Much information was provided by C.I.V.D., which provides credit to groups of women in both 5-year and 6-month loans. 5% interest is charged on the 5-year loan, which are typically in the range of 1,000,000 – 2,000,000 CFA. 6 month loans, the capital for which if provided by the interest made on the 5-year loans, are typically in the 200,000 – 300,000 CFA range and charge approximately 12% annual interest. There is also revolving credit for individuals, a scheme, which operates on a more informal basis. C.I.V.D. representatives reckoned that 40,000 CFA ($65) would be a likely ‘price point’ at which a bicycle would be affordable, via a 6-month loan, for the poorest residents of Paos Koto.
The modes of transport currently being used in the Paos Koto area were also discussed. Animal Carts, for instance were cited as less than ideal for many applications, mostly due to their high cost: 250,000 CFA ($400) for a good horse and cart, plus 15,000 CFA ($24 US) per month to feed the horse. Maintenance costs to operate the cart are also an expense, though exact figures were not available. Renting a cart and horse costs 1,000 – 3,000 CFA ($1.60 - $4.80) depending on cargo and length of the trip. It was agreed that bicycles, the use of which is very limited in the area, would be an appropriate alternative to horse carts for some trips, resulting in cost savings.

While animal carts are a popular mode of local transport, walking and headloading are the most widely used modes of transport, especially among women, who execute most of the trips in Paos Koto. It was agreed that a bicycle would yield significant timesavings over walking.

Regarding the mission’s aim to promote cycling among women in the region, all parties in attendance agreed that this was an important objective, citing the particular transport burden shouldered by women in rural Senegal, who must manage myriad household tasks and errands.

The meeting then adjourned and departed for Kaba Koto, a small village that was previously identified an ideal site for the first Afribike pilot project. Reasons why Kaba Koto had been pre-selected as an ideal site included: the relative quality (lack of sand) on paths and roads; receptivity of the local community to the project; capacity of local NGOs and credit mechanisms; and the fact that the village was characterized as typical of villages throughout the region.

Most residents of the village, including tribal leaders received the mission. No bikes were seen operating in the village upon arrival, though during the visit two teenage boys arrived, using their bicycles to sell cosmetics and sweets. Both of their bicycles were in poor condition; the boys recounted to the mission their ongoing struggle to obtain adequate spares and service.

After informal conversations with village residents and an impromptu demonstration of cycling with a mountain bicycle brought by the mission, introductions of local leaders-- including a contingent of women leaders-- commenced. After the mission’s aims were introduced to the village, the mission posed several questions to the village transport needs, the prospect of women riding bicycles, and current knowledge about bicycles. A big part of the discussion focused on the particular transportation challenges facing men, women and children of the village. All respondents were unequivocal in voicing their desire to promote cycling in the area, and agreed that women, particularly younger women, should be targeted.

Ibrahima Diallo, a resident of the village and Manager of the Kaba Koto Women’s Agricultural Group, was very helpful in translating conversations, as he speaks Wolof, French and English. Mr. Diallo also provided the mission with a map of the area (see appendix a), including the configuration and distances of the village with respect to the clinic, school, main road and ‘sweet water’ well. Distances to popular destinations from Kaba Koto were listed as follows:
Given the total lack of cycles and cyclists currently operating in Kaba Koto, and the related lack of bike expertise and appropriate tools, it was agreed that the training component of the pilot project is a critical component of any IMT interventions undertaken in the area.

4. Layif, APCR (Gouwane)

In Gouwane, the mission met with Xaali MBAY, the president of Layif, the Association d'Appui au Developpement at their offices in Gouwane. The mission was introduced to a group of women undergoing a training class in alphabtetization. According to Layif, these women must walk from village to village in executing their duties as 'alphabetizers', or educators. Layif perceives bicycles as a solution to this problem.

Several days after this visit, Layif presented the mission with a proposal to procure 38,100 single-speed mountain bicycles at a cost of 40,000 CFA per unit. ($65). The bicycles would be micro-financed to residents of approximately 381 rural communities and groups throughout Senegal via 6-month loan schemes (see appendix D).

The second village visit was executed the following day. After a meeting similar to the meeting at Kaba Koto commenced at a local schoolhouse, the mission proceeded to Gouwane proper to meet with president of Gouwane, an APCR member.

The president indicated that beans, millet and peanuts are all transported from local villages to main market in Gouwane. Cloth is also a popular local product. Currently, markets only take place once per week, because the cost of transporting goods can only be borne once per week. ‘With improved transport, then markets can take place more than once per week and small business can flourish,’ said the President.

The distances between villages and popular destinations such as clinics, markets and services is comparable to communities within Paos Koto. The roads in and around Gouwane, however, are sandier than those in Paos Koto, making the implementation of a successful project more dependent upon road and bicycle path improvements.

Currently, the most popular mode of load-carrying transport in Gouwane is the horse-cart, which costs 150,000 CFA for one horse, and 80,000 – 150,000 CFA for one cart, depending on quality. Maintenance for horse and cart is estimated at 500 CFA/day. ($.81 per day or $21.3 per month)

It costs 1,500 CFA ($2.40) to rent a horse cart for one 7km trip. It was agreed that load-carrying bicycles represent an ideal alternative to the horse-cart, but only for small to medium loads. For loads in excess of approximately 40kg, it was agreed that the horse cart is probably preferable to a conventional load-carrying bicycle with a
strong back rack. It remains undetermined as to whether or not a more expensive and higher-capacity load-carrying bicycle like the Xtracycle would be more economical than the horse-cart. (kg of cargo per km of travel)

As with Paos Koto, it was indicated that 40,000 CFA ($65) would be a likely ‘price point’ at which a bicycle would be affordable, via a 6-month loan, for poorest residents of the Gouwane area. It was also indicated that at this price, many rural residents would not need micofinancing, a significant fact if local bicycle dealers are to be viable. The president also inquired whether or not it was possible to use bicycle technologies to help grind beans. The mission responded that such technologies (human-powered grinding implements using cycle technology) did indeed exist, and that the mission would attempt to establish contact with industries currently offering such technologies.

5. ABASED (Dakar)

While the mission was stationed in Kaolack, informal interviews with local bicycle users and retail shop owners were undertaken. Based on the advice of two local cyclists encountered during these interviews, the mission visited a small local shop selling used bikes. Upon arriving at the shop, the mission found a small storefront staffed by Yves Berard Tenneng and Samba Gueye, staff members of the Dakar-based Association des Bacheliers Pan L’Émplacy et Développement (ABASED).

Upon further discussion, it was revealed that the used bicycles being sold were sourced via Pedals for Progress, an NGO based in New Jersey, USA which collects used bicycles from the USA and ships them abroad to developing countries. In order to gain more information about ABASED’s used bicycle program, a meeting was scheduled for later in the week at ABASED’s offices in Dakar.

The meeting was attended by the following ABASED staff members: Samba Gueye, financial officer; Valene Lepine, AIDS prevention director; Yves Berard Tenneng, bike project officer, Kaolack; Aliou Diatta Ziguse, founder of Abased, based in southern Senegal.

ABASED first conceived of sourcing low-cost used bicycles as a solution to transport problems encountered by university students going to work and school. As paying for motorized transport to send children to school is a big household expense, younger students were also targeted. Other motives for the project included the prospects for job creation in bicycle sales, service and repair, and environmental benefits.

ABASED imported its first and only container to date in June 1999, yet it only cleared customs in early September 1999. This delay was due to customs and clearing problems. Tariff and tax costs on the container of bicycles amounted to 61.59%, so the importation of the container was significantly more expensive than they estimated.

The costs to ship the container were paid by Rotary Club of New Jersey. Pedals for Progress, as a matter of policy, ships bikes a very little charge to overseas NGOs that are able to pay customs. The container contained a variety of bicycles. To sell the bicycles, ABASED established small shops in Dakar and Kaolack, and is working to establish another shop in the south (south of the Gambia) In Kaolack, non-ABASED personnel are responsible for running the shop.
440 bikes were in the ABASED container. As of February 10, 1999:

440 bikes in the container
100 bikes given away free of charge
86 sold
200 bikes left

ABASED indicated that there in an enormous demand for mountain bikes in rural Senegal, as narrow-tired sport bikes are not suitable for dirt roads and are not sufficiently robust to withstand utilitarian daily use. The mountain bikes were sold first. They reckon that several mountain bike shops throughout Senegal is possible given the demand.

ABASED found that people were willing to pay 50,000 CFA for a used mountain bike, and 25,000 – 30,000 CFA for other types. Some problems with beneficiaries receiving free or low-cost bicycles and then selling them at a higher cost were encountered. ABASED emphasized the need for marketing, education and outreach as necessary components of a bicycle promotion project.

ABASED's goal is to receive one container every three months, using the revenue from each previous container to sustain a revolving fund. It is not yet clear how attainable this goal is due to the facts that the non-mountain bikes are not selling very briskly, and significant unforeseen charges were incurred in clearing the container.

6. ILO (International Labour Organization) (Dakar)

On Monday, February 07 the mission visited the office of Valter Nebuloni, expert on employment-intensive programs within the Sahelian Africa Multidisciplinary Advisory Team of ILO in Dakar, Senegal.

The mission was introduced to ASIST (Advisory Support Services and Training for Labour-based Infrastructure Programs) who promotes employment-intensive strategies for improving urban infrastructure, i.e. road construction.

Afribike was informed that the RTTP is pursuing a working relationship with ASSIST in all rural projects undertaken. Afribike was requested to contact, of ASSIST in Zimbabwe, Fafemeh Ali-Nedjad in pursuit of possible collaboration in labour-based techniques and designs.

In addition, Mr. Nebuloni requested to be kept abreast of the progress of the project. It was made clear there is much to be gained from a partnership with ILO, and that the existing relationship with RTTP will facilitate appropriate road and cycle path construction.

7. Ambassade d’Afrique du Sud (Dakar)

On Monday, February 07 the mission visited the South African embassy and introduced the Afribike project and the intended cooperation and exchange to the first secretary, Mauritz Lindeque and his assistant Mr. Talifhani Mbelengwa.
The reception was very warm and the interest in the development of the proposed exchange definite. They offered unequivocal support in the course of the proposed project.

8. **Women and Cycling; the Case of Oumou Diallo (Dakar)**

While the mission found a high level of support for the concept of promoting cycling among Senegalese women in the near future, the mission did not encounter any women cyclists in Senegal until meeting Oumou Diallo.

Upon interviewing Ms. Diallo, the mission gained a greater understanding of the cultural barriers facing potential women cyclists. According to Ms. Diallo, she was only able to begin and sustain her cycling due to the support of her father, as other members of her family and social sphere actively discouraged her from cycling as an unfeminine behavior.

Ms. Diallo uses her bicycle to execute errands, commute to her job in Dakar at a cell phone company, and travel to University where she is completing a Masters degree in marketing. Ms. Diallo is 27 years old, speaks French, Wolof, English and Italian, possesses computer and office skills, and is an accomplished cyclist. Though Ms. Diallo lacks mechanical skills, she is very aware of the cultural, safety and gender issues associated with cycling.

Due to Ms. Diallo's qualifications and enthusiasm at the prospect of becoming involved in a project to assist women in overcoming the barriers to begin cycling, the mission identified Ms. Diallo as a potential resource in any future efforts to promote cycling among women.

9. **Federation of Senegal Cyclists/Bomthi Sport (Dakar)**

Seeking to establish a relationship with other private sector stakeholders, the mission met with Michel Thiomb, president of the Federation of Senegal Cyclists. The Federation has 300 members, and organizes sport cycling events (rides and rallies) throughout the year. After briefing Mr. Thiomb about the mission and the aims of Afribike, RTTP and PNIR, the mission received his pledge to assist future projects by helping to coordinate awareness and marketing campaigns, promoting women's cycling, and providing contacts to local individuals with mechanical expertise. Mr. Thiomb, who operates a warehousing space and coordinates the importation of bicycles from Italy, also offered his support and advisement to any efforts to import bicycles for rural areas.

Mr. Thiomb also operates the premier bicycle shop in Senegal, Bomthi Sports, located in downtown Dakar. Most of the bicycles for sale in Mr. Thiomb's shop are out of the price range of most Senegalese, as Mr. Thiomb is targeting the relatively affluent recreational bicycle market. Mr. Thiomb reiterated many of the complaints of Mr. Handane at ISENCY regarding the high tax and tariffs levied on bicycles, and added that because of the limited number of cyclists in Senegal, only small batches of product are imported at a time, which results in a higher cost per unit. (larger orders would result in cost savings)
10. Review of Mission (Dakar)

On February 7, at the offices of APCR, the Afribike mission presented the preliminary results of the mission to Moussa Camara Lo, Coordinator, PNIR. In responding to the mission's report, Mr. Lo suggested that it might be useful to contact the Association of Senegalese Women, given the project's gender component. In general, Mr. Lo was satisfied with the mission's accomplishments. After reviewing the mission, the upcoming South Africa Afribike Training Course was discussed, and decisions made about who should. In cooperation with Mr. Lo, the mission identified Cheikh Amadou Bamba Thoiye, RTTP Coordinator and Coordinator of Feeder Roads, Ministry of Public Works; a representative from OSDIL; and Oumou Diallo as the best candidates, based on their potential to be trained as effective local champions of IMT.

II. APPRAISAL OF MISSION OBJECTIVES

Objective 1: Establish a basis for IMT promotion in Senegal

Clearly there is widespread support for efforts to increase access to IMT in rural Senegal. The mission was successful in formalizing this support, and in identifying local candidates to travel to South Africa to participate in the Afribike Training Course and return to Senegal prepared to act as local champions for IMT capable of implementing bicycle projects in partnership with Afribike.

Objective 2: Identify the specific barriers to increased IMT usage

Affordability was the most frequently cited barrier to increased bicycle usage. The mission, according to local interviews with NGOs and individuals, found that the 'price point' at which bicycles become affordable (with a 6-month credit scheme) to low-income households in rural areas (40,000 CFA), or approximately half the cost of current bicycles. Clearly there are a number of market failures that limit the use of bicycles in Senegal:

- regressive tariff and tax policies
- lack of bicycle industry contacts to manufacturers in China/Taiwan
- limited scale of current import and assembly industry
- lack of retail and service outlets in rural areas
- small-scale of local industry (resulting in high production costs)

If these economic barriers were redressed, it is likely that significant increases in bicycle use would result. (see appendix C)

It is recommended that a policy of bicycle tariff and tax reduction and or elimination be incorporated into the Senegal national rural transport strategy. As current bicycle importation and sales are quite low, such a policy would have negligible effects on government revenue while significantly reducing the cost of bicycles for millions of working poor.
Access to appropriate bicycles was also identified as a major barrier, as most bicycles currently available, 'racer' bicycles, possess thin tires that are not suitable for use on Senegal's sandy rural roads and paths. The frame geometry of these bicycles is also not suitable for rural, utility applications, nor are they very comfortable, particularly for women.

Related to the inaccessibility of appropriate bicycles is the poor condition of many roads in particularly sandy regions of Senegal, which preclude the effective use of all kinds of bicycles (even mountain bikes) unless simultaneous road/path improvements are executed. Gouwane is one such example of an area were even mountain bikes will not operate optimally unless concurrent road/path improvements are completed.

The 'gender barrier' which discourages women from cycling is very complex and inseparable from the affordability issue. In many cases it was unclear as to the degree to which cycling by women was discouraged purely by nature of cultured gender roles rather than a result of the household economic situation. Put another way, if a household has one bicycle, women are not likely to gain access to it. If two bicycles are owned by the household (a rarity given the poverty of the rural Senegal) the prospects for women cycling improve.

Traditional clothing was not found to be a major barrier to cycling among men, as many men wearing Bou-bous were seen cycling with no apparent problem. For women, the clothing issue may be more problematic, as women's clothing tends to be more restrictive in that more material has a better chance of obstructing pedaling motion or getting caught in the drivetrain. A 'women's bicycle' with a slanted top tube may be a solution to this problem. (see appendix B)

**Objective 3: Gauge the potential for increased IMT usage**

Clearly there is a great potential for increasing the use of bicycles in rural Senegal. All parties consulted agreed that there is an enormous demand for bicycles. Interventions which increase the affordability, access, appropriateness, load-carrying capacity, and desirability of bicycles are likely to meet with success, provided they are executed in concert with road/path improvements where needed.

**Objective 4: Map medium and long-term strategies to increase IMT usage.**

**III. RECOMMENDATIONS**

The mission recommends that a pilot project in Paos Koto should be undertaken to gauge the efficacy of a coordinated program of:

- Procurement of appropriate Senegal-specific bicycles and accessories
- Macro and microeconomic interventions to increase affordability
- Infrastructure improvements
- Training

Further, it is recommended that smaller pilots should be undertaken simultaneously in Gouwane and perhaps Taiba Ndiaye.
Procurement of Appropriate Bicycles

Based on an appraisal of local conditions in rural Senegal, it is not recommended that a variety of used bicycles be used in the pilot projects. There is a very limited capacity in Senegal to service different types of bicycles, local road conditions dictate a very specific type of bicycle, and the 'price point' at which bicycles are affordable is very close to the cost of delivering an appropriate new mountain bike. It is the recommendation of the mission that the project should source appropriate new mountain bicycles for the project. (see appendix B)

It is possible that such an exercise could be undertaken in cooperation with ISENCY and Layif, as both have demonstrated a formal interest in importing new, appropriate mountain bicycles. ABASED is another potential partner in such an exercise, as they have demonstrated some interest as well. Through establishing these partnerships and importing increasing quantities of bicycles, it may be possible to further decrease the cost per unit.

Interventions to Increase Affordability

According to APCR, it is possible to gain a tariff and tax waiver on the importation of bicycles for the pilot project. The feasibility of this, however, is in question because in order to secure such a waiver, law states that the product must be donated to the beneficiaries. It is possible that the waiver could be secured nonetheless, if the government agrees that the requirements for tariff-free importation are met if the proceeds from bikes sales are returned to the beneficiaries in the form of a 'revolving credit facility' to purchase more bicycles.

With regard to value added tax, the mission recommends that a campaign be undertaken to reduce the value added tax on bicycles from the current 20% level (luxury item), to the 7% level (basic good).

In both Paos Koto and Gouwane, local NGOs with demonstrated experience in administering microfinance programs exist. It has been proposed that a 6-month credit program for a 40,000 CFA "Afribike" be implemented, with a 25% downpayment required upon delivery. Annual interest should be below 6%.

In future iterations of the project, the affordability of bicycles could be further increased by increasing the scale of the project, which would enable 'economies of scale' benefits with respect to procurement and delivery.

A one-off subsidy program should be explored. A subsidy of 20% - 25% per bicycle, in conjunction with the interventions outlined above, could make bicycles affordable to the poorest households, which could significantly increasing bicycle use to the point where local 'bicycle economies' (creating jobs in bicycle service, accessories sales, repair, rental, delivery, etc.) could be established, an eventuality which would also lead to the efficient economies of scale listed above.
Infrastructure Improvements

As many of the roads and paths in Gouwane are very sandy, improvements will be necessary in order to enable efficient use of bicycle transport. Improvements will be undertaken using labour-based techniques and the use of local material. (e.g. local silts that can be used in a slurry) As the paths will be dedicated cycle paths, a path width of 1.5m - 2m should be sufficient.

The use of labour-based path construction will also engender increases in local income for both men and women, maximizing the poverty alleviation benefits of the project.

It should be noted that the condition of roads and paths are highly variable according to season. In the dry season, from November to July, silt or clay-based roads are used, while in the rainy season, (August, Sept. October) sand is used as the silt becomes prohibitively slippery.

In Paos Koto the condition of most roads and paths is suitable for cycling, and only 'spot improvements' in critical areas will be necessary.

The Afribike Training Program

It is proposed that representatives from Afribike implement the training component of the project in conjunction with the local partners. The Afribike Training Program, in addition to teaching project beneficiaries critical cycling skills, trains local artisans to become locally certified "Afribike Instructors" capable of continuing the execution of training, service and sales after Afribike representatives leave the project site.
Appendix A:

List of Persons met on Mission: (in order met)

Demba Diaw, Director of the Ministry of Equipment and Terrestrial Transport
Oumar Sileye Ba, Director of the Ministry of Decentralisation
Mamadou Moustapha Mbengue, Director of the Ministry of Agriculture.
Aly Lo, the President of the Association des Presidents de Conseil Rural (APCR).
Abdou Aziz YADE, officer, APCR
George Handane, the Director of ISENCY
Mor Kare NDIAYE, Principal Secretary of Administration, Paos Koto ;
Lamine NDIAYE, Chief of the Regional Division of Public Works, Kaolack ;
Madou Thiem, director of C.I.V.D (Community Village Development)
Mamadou Talla, Secretary General, OSDIL
Ibrahima Diallo, a resident of the village and Manager of the Kaba Koto
Xaali MBAY, President, LAYIF
President, Gouwane APCR
Yves Berard Tenneng, bike project director, ABASED
Samba Gueye, Treasurer, ABASED
Valene Lepine, AIDS prevention director, ABASED
Aliou Diatta Ziguse, President, ABASED
Valter Nebuloni, Sahelian Africa Multidisciplinary Advisory Team of ILO
Mauritz Lindeque, South African Embassy, Dakar
Mr. Talifhani Mbelengwa, South African Embassy, Dakar
Oumou Diallo, Senegalese Cyclist
Michel Thiomb, president of the Federation of Senegal Cyclists
Appendix B:

Draft Specifications of a Bicycle Appropriate for Use in Rural Senegal

Frame:

- Steel with slanted top-tube to accommodate women and bou-bous
- "Trekking bike" geometry
- Horizontal dropouts
- Orange or yellow for visibility

Componentry:

- Wide, comfortable seat
- Upright handlebars
- 26" x 2" tires; 36-spoke-tires 26 x 1.9; steel rims
- Single speed freewheel
- Gearing: (40 - 18) or (36 - 20)
- One-piece cranks
- Cantilever or 'v' brakes
- Steel pedals

Accessories included:

- Strong back rack included