

Bicycles as a lever for rural women's empowerment

Lessons learned from bicycle projects in sub-Saharan Africa and an alternative approach in southern Mozambique

Conference sub-theme

Gender, transport and economic development

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Abstract

This study will investigate the role of bicycles as a lever of empowerment for rural women. It will approach the topic by reviewing women's empowerment and transport theories in the context of developing countries. It will be followed by an understanding of the bicycle as an affordable, appropriate and sustainable means of transport for rural women, one which affects a positive and multidimensional impact on individuals, households and communities. Since the 1990s there have been diverse bicycle projects in Africa. Lessons learned from them evidence a lack of both gender analysis and gender mainstreaming strategies. It is also significant that none of these projects put forth comprehensive monitoring and evaluation systems to measure the role bicycles play in community empowerment. The analysis of Build a Better Bicycle (BABB), a project being developed in southern Mozambique, will demonstrate how bicycles can act as a lever of empowerment for Mozambican rural women, considering the country's social context.

Acronyms

BABB	Build a Better Bicycle project
BEN	Bicycling Empowerment Network
CBOs	Community-based organisations
I-CE	Interface for Cycling Expertise
ITDP	Institute for Transportation and Development Policy
IMT	Intermediate means of transport
NGO	Non-governmental organisations
MDG	Millennium Development Goals
M&E	Monitoring and evaluation
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund

Introduction

During the last three decades, gender analysis and mainstreaming have been preconditions for all development interventions that aim to impact gender equality, women's empowerment and poverty reduction. Despite extensive discourse and resources that focus on women as key actors for development, their situation has not changed considerably. According to the Gender Equity Index, there is "no nation in the world today in which women have the same opportunities as men... women are still disadvantaged in economic and political life around the world" (Social Watch, 2005: 73). There are many reasons why development interventions have failed in this regard, but the most important issue is that regardless of using gender as a label, most policies, programmes and projects either treat gender as a tack-on subject or ignore gender issues altogether. This is the case with the transport area.

Transport is crucial to reduce poverty and empower individuals and communities. Transport facilitates access to social services, income-generating opportunities and community activities. Many development programs aim to provide sustainable, appropriate and affordable transport worldwide. Within such initiatives, bicycles have been considered an effective intermediate means of transport (IMT) for both urban and rural development, with a multidimensional impact for social, economic and political empowerment. These interventions, however, tend to perpetuate negative dynamics within gender roles: even though women are the main 'transporters', men retain predominant access to transport solutions (Starkey, 2001). During *Velomondial 2006*—an international conference recently held in South Africa on the topic of bicycles and development—there was no consideration of the gender perspective at all.

Section one of this paper presents an overview of women's empowerment and transport theories, highlighting bicycles as an affordable, sustainable and appropriate IMT for rural women. Section two examines lessons learned from recent bicycle projects in sub-Saharan Africa. Section three discusses *Build a Better Bicycle* (BABB), a project—in development in Southern Mozambique—that focuses on bicycles as a lever for rural women's empowerment. Section four concludes by analysing the relevance of bicycles for rural women's empowerment and to the significance of this topic within current debates and practice on gender and transport.

Section 1: Bicycles as a lever for rural women's empowerment

1.1 Gender equality and women's empowerment

Gender inequality is, unquestionably, an obstacle for development. Despite women's role as key actors in development at the family and community level, their needs and perspectives are still largely ignored and limited within social policy processes and practices.

The different needs and perspectives from women and men are not only biological, but also associated with culturally-defined roles and behaviours determined by an array of beliefs, norms and practices. Gender is, therefore, a social construct that sets in place social, economic and political relations for and between men and women. An analysis of the roles played by men and women in a community and within the household must consider the interdependence and dynamism inherent to their relationship. These interpersonal dynamics mean that every policy focused solely on one gender has a positive or negative implication for the other (Moser, 1989).

The third UN's Millennium Development Goal (MDG) combines 'gender equality' and 'women's empowerment'. Indeed, women's empowerment must be considered a pre-requisite for authentic gender equality: it is impossible to provide equal opportunities for women as long as they endure asymmetric social, economic and political relations with men. Therefore, societies will need to adjust traditional power dynamics to bring women into decision-making processes. Beyond enabling opportunities, gender equality means causing individuals to perceive themselves as comprising an integral part of the improvement of their own lives, and those of their families and communities.

Empowerment is a process that deals not only with the visible and invisible dimensions of power, but mainly a third dimension where power is hidden in social conditioning or embedded in the discourse all the way through truth, knowledge and normalization (Lukes, 1974). A process of empowerment, therefore, has to take hold of the dominant power strategy, attacking its framework. Such an attack means a widespread social, cultural, political and economic revolution, reaching nodal points and aiming to promote social consciousness. Only when women

are fully empowered, will they be able to take a more decisive role in their families and their communities (Oxaal, 1997).

The distinction between women's empowerment as an MDG and as prerequisite for social consciousness is an important one. The former is a means to an end and the latter is an end in itself. Empowerment is generally defined as a means to poverty reduction, which creates the need to translate it into measurable and objectively verifiable terms. As an end in itself, however, empowerment aims to reverse power relations in a community. Making empowerment measurable simplifies the nature of power and, according to Kabeer, can be a lost task insofar as "the value of the concept lies precisely in its 'fuzziness'" (2001:18). The attempt to reconcile these two perspectives and create a learning cycle that improves the policy process lies in the measurement of access to commodities within an approach for social consciousness. According to Sen (1992), individuals with access to particular commodities will make decisions on the kind of life they believe they have reason to value. Access to resources, services or goods does not always lead to empowerment outcomes, but those are certainly preconditions for empowerment. While assuring access, interventions should also focus on educating for confidence, citizenship, collaboration, political awareness, critical investigation and information-production; creating a situation in which individuals are able to enjoy a substantive freedom and make decisions about their public and personal lives.

From this perspective, levels of empowerment can be measured along a continuum of achievements on social, economic and political factors. Such factors include access to safe water, fuel, health care, education, income-generating activities, diversification of tools and fruits of production, access to credit, and participation in community activities. The achievement of these functionings, as labelled by Sen (1992), can be improved with the provision of levers of empowerment.

Access to credit, irrigation systems, livestock, training, a plot of land, information or a bicycle: all of these are levers of empowerment. They refer to resources, knowledge or technology that can be used to benefit an individual or a community, helping them to overcome existing constraints or disadvantaged circumstances. In addition to the direct benefits they can offer, such levers generate an array of cross-related activities that have an impact on the empowerment of

individuals. For example, enrolling in a credit scheme also gives women the potential to form organisations that confront against other issues such as domestic violence or alcohol abuse, while providing them with a positive environment for sharing experiences and information, building confidence and being able to make life choices that were previously denied to them (Kabeer, 2001; Mayoux, 2005).

1.2 Transport as a lever of empowerment

Transport is a key element for sustainable development. Poor access to transportation services greatly hinders economic and social development and contributes to poverty. Affordable, appropriate and reliable transport can lead to a ‘virtuous cycle’, improving livelihood strategies of the rural poor. It also strengthens the “exchange of information, social awareness and the promotion of social unity” (Omar, 2001:3). Transport is an important lever for women’s empowerment especially considering its potential for a multidimensional impact on improved health, education, income, participation and reduced vulnerability.

Transport policies must operate through a three-pronged approach that addresses infrastructure, access to services and multi-modal means of transportation. Such policies should cover solutions from walking and carrying to IMT and large-scale motorised transport. The reality, however, is that transport policies in developing countries have focused on massive investment in roads and highways, advances that do not necessarily address the need of rural communities to commute within their villages or in the surrounding areas (Starkey, 2001; World Bank, 2002).

This is particularly true concerning the transport needs of rural women. In rural sub-Saharan Africa, the most common means of transport are the legs, heads, and backs of African women (Peters, 2001). Lack of basic access and mobility is an important constraint in these women’s lives, perpetuating their disadvantaged position in their communities.

Due to the gendered division of labour, women have a triple role of productive and reproductive work, as well as community management. Their multipurpose transport needs include domestic travel (i.e. collecting water and firewood), agricultural travel (i.e. field and marketplace) and access to services and social facilities and activities (Moser, 1989; Peters, 2001). During a typical

day they take short, frequent and dispersed trips in order to: fetch water and firewood; cart foodstuffs between farm, home and market or travel to health clinics with children (Tengey et al, 1999). They go walking and headloading, usually accompanied by children or elderly relatives. In sub-Saharan Africa, women account for 70% of household labour and 85% of household daily effort spent on transport. They carry at least three times more ton/kilometres per year than men. They walk between 15-30 hours per week on transport-related chores, carrying between 30-50 kilograms and frequently with a baby on their backs. These are heavier loads than the maximum 20kg recommended by the International Labour Organisation, and commonly result in long-term health problems. To help their mothers, young girls are often removed from school to assist with chores (Heyen-Perschon, 2001; Peters, 2001; Omar, 2001; Starkey, 2001; World Bank, 2002).

There is a diversity of IMT that can alleviate women's transport burden by minimizing the time and effort in daily chores. It would improve the quality of life of women and their families, which could also exert a strong impact on the community. Such IMT include wheelbarrows, handcarts, pack donkeys, donkey carts, cycle rickshaws and bicycles, to name a few. Deciding on the type of transport to adopt depends on issues such as its relevance and appropriateness for the community and for the transport users, its economic implications, its promotion and incentives and the socio-cultural context.

Studies have demonstrated that bicycles are often the most appropriate technology for short distances, with the lowest operating costs in sub-Saharan Africa. A bicycle carries up to four times the weight, goes as far and travels twice as fast as a person walking. It has low level of maintenance, low procurement and operating costs. Bicycles can be used on local and low-quality paths by broad segments of the population (Heyen-Perschon, 2001; Starkey, 2001). A bicycle can help a woman cultivate a plot of land previously inaccessible and transport the crop to a market that was once too far away. It can carry women to health clinics for medical treatments for themselves and their families and can carry their children to school. As a reliable and efficient means of transportation, the bicycle grants rural women free time to decide how best to care for their families and lead their lives.

Section 2: Lessons learned from existing bicycle projects in sub-Saharan Africa

There are several projects in sub-Saharan Africa focusing on the bicycle as an affordable, sustainable and appropriate means of transport for urban and rural areas. However, it has been difficult to identify projects that consider bicycle as an effective lever for rural women's empowerment. The reference case study occurred not in Africa but in Tamil Nadu, India, during the early 1990s, when bicycles were introduced as a component of a women's literacy campaign. The bicycle was part of an empowering approach that educated for social awareness and, in this sense, played the role of leveraging issues around gender imbalances. The results of this intervention were considered extremely successful in addressing gender inequality, giving women free time and changing traditional roles within their communities (Omar, 2001; Starkey, 2001).

In Africa, however, programmes and projects have focused on bicycle delivery without a discussion about the impact on individual and community empowerment. This section examines some of these bicycle projects, highlighting both positive and negative aspects that form an important body of knowledge to be considered in the provision of means of transport. The analysis is based on secondary sources from the projects and on the debates that took place during *Velomondial 2006*.

2.1 Planning process

It is important to note that development agencies' policies for rural mobility usually focus on infrastructure investment, particularly roads and highways. Such investments are certainly important for transport efficiency, but do not fully address the needs of households in rural areas, let alone the transport needs of rural women. The discussion of gender and IMT as affordable solutions for women in sub-Saharan Africa relies largely on efforts at the advocacy level through networks such as the *International Forum for Rural Transport and Development* (IFRTD) or the *Gender and Transport Community* (GATNET).

The most notable fact among bicycle projects in sub-Saharan Africa is the lack of a gender analysis at any level. While in countries such as Kenya, Ghana and Uganda development organisations (Practical Action, Centre for Cycling Expertise and First African Bicycle Information Office, respectively) are lobbying with their governments to include cyclists and pedestrians in their transport master plan, gender is excluded from the debate. Interface for Cycling Expertise (I-CE), a Dutch agency that supports these organisations, concentrates all its efforts in cities and does not approach gender issues. When questioned during *Velomondial 2006*, I-CE's Executive Director acknowledged that there is a need to limit the scope of their programmes. The problem is that a gender analysis should not be a separate, tack-on component, but rather mainstreamed with the policy process, helping in the promotion of a comprehensive and sustainable intervention.

In certain cases, there is limited beneficiary participation in the planning process. Bicycling Empowerment Network (BEN) Namibia, for example, has delivered bicycles to activists for home-based care projects. The number and the technical specification of the bicycles are usually defined and requested by project managers. In many cases, the activists did not participate in the decision-making and, in some cases, bicycles proved to be an inappropriate solution for their transport needs. Moreover, after the delivery, it became clear that the bicycles would be restricted to use for work-related trips, a negative aspect since they could also improve individuals' lives, particularly because the majority of activists are women. The result has been an underutilisation of bicycles and lack of ownership by their users for both the bicycles and the process. When all stakeholders are involved in the planning process, these issues can be openly debated and negotiated. BEN Namibia is now developing a partnership framework that includes a comprehensive participatory research with different stakeholders, enabling them to establish likely benefits, costs, usage patterns and constraints regarding the adoption of bicycles.

A participatory approach also gives policy-makers the opportunity to understand the effect of cultural-specific issues on bicycle adoption. Any intervention in Uganda, for example, has to take into account that bicycles are perceived as prestigious for men as they can travel outside the village to trade, and so a woman cycling will likely be considered as an attempt to be more 'manly' (Peters, 2001). This perception has tremendous consequences for the project's

effectiveness, but will only become clear when beneficiaries are involved in the planning process from the very beginning.

Besides the absence of participatory research in the planning stages, bicycle projects across sub-Saharan Africa also lack comprehensive monitoring and evaluation (M&E) systems that measure outcomes on community empowerment. An M&E system is crucial to determine the relevance, efficiency, effectiveness, impact and sustainability of policies, programmes and projects. Effective M&E promotes organizational development and learning, serving as a planning tool for future projects and contributing to the implementation of a cooperative framework for partnerships (Dale, 2005).

Considering bicycles as a lever for the empowerment of communities, a wide-ranging M&E system should target social, economic and political factors, bridging issues from women's empowerment, transport and rural development perspectives. Nonetheless, a comprehensive system is not available in any existing approach: neither on policies promoting cycling, nor on bicycle delivery projects. As such, transport indicators are one-dimensional, focusing solely on income-generating activities, as in the *Western Kenya Project* from Practical Action; or on improving the mobility of the health system, as in programmes from Institute for Transportation and Development Policy (ITDP) ; or on improving the mobility of home-based care activists, as in BEN Namibia's projects.

2.2 Provision of bicycles and services

Even though there are remnants of a bicycle industry in some sub-Saharan African countries such as Tanzania, Zambia and Uganda (Heyen-Perschon, 2001), most bicycles delivered through development projects are second-hand donations from North America, Europe and Japan. Bicycles for Humanity is an example of an international network that channels donations collected by non-governmental organisations (NGOs) in developed countries to projects in sub-Saharan Africa. This type of donation, however, raises two concerns. The first is regarding the appropriateness and the quality of the product delivered. Limited participation and lack of an M&E system able to measure the real impact a bicycle offers can result in potentially negative consequences for the provision of appropriate products. The bicycles donated often fit the needs

of users in developed cities, which are quite different from the transport needs of a woman in a rural village. The quality of aid, rather than the quantity, is an important requirement for its effectiveness.

The second concern is related to the distribution model. Because the bicycles are second-hand and already donations, some organisations prefer to give the bicycle to the user at no cost. Pure donations, however, do not offer any possibility of ownership on the beneficiary side and tend to perpetuate the hand-out approach used by international organisations without the participation of communities (Chambers, 1993). Again, if the goal is to implement a sustainable project, communities must engage since the beginning—and surely there is nothing more compelling to commit people than their own investment of time or money.

The *California Bike Coalition*, an initiative from ITDP, has undertaken valuable work to improve the quality of bicycles available through development projects. The Coalition operates in partnership with the international bicycle industry to create a local industry with economies of scale, business development models and product diversification. Despite the high quality of their main product, the California Bike, it has a male-frame and multiple gears so is often inadequate for the needs of rural women. Nonetheless, the California Bike has been distributed to activists within health care systems in sub-Saharan Africa. The demand for single-speed, women-friendly bicycles is, therefore, urgent.

Finally, a crucial issue around the provision of bicycles is the availability of repair and maintenance services. Different reports on rural transport (World Bank, 2002; Starkey, 2001) have analysed the relationship between the existing (or the lack of) critical mass and the adoption of IMT in a community. If in a village there are very few bicycle users, probably there will be no repair services. In the same way, the lack of repair services may slow or endanger the bicycle's adoption. Along with the provision of bicycles there must be mechanical capacity for repair and maintenance—several projects have emphasised training for bicycle mechanics, including BEN South Africa and Namibia, Village Bicycle Project in Ghana and ITDP in various countries. Focusing on building the capacity of mechanics generates support at the community level by involving more people in the project level and providing individuals with income-generating opportunities.

Section 3: BABB, bicycles for Mozambican rural women's empowerment

Based on a brief analysis of existing bicycle projects in sub-Saharan Africa, the main lessons learned emphasise the importance of gender analysis, beneficiary participation, comprehensive M&E systems, mechanisms to assure beneficiary ownership and the provision of mechanical skills in the community level. The following section of this paper examines *Build a Better Bicycle* (BABB), a project currently being developed in Mozambique by Jacana, an international NGO. BABB aims to empower rural women through appropriate means of transport. This analysis demonstrates how BABB's project design has taken into account lessons learned from other bicycle projects, and outlines the challenges it faces.

3.1 Mozambique social context

Mozambique has been considered one of Africa's success stories in terms of political and economic recovery. The country's political reconciliation in 1992 brought stability and an ambitious agenda for economic growth and social development. However, the legacy of 16 years of civil war means that Mozambique is one of the poorest countries in the world, ranking 168 out of 177 countries in the UNDP Human Development Index, and 133 out of 140 in the Gender Development Index. Despite notable progress in the last decade, 54.1% of the population remains below the national poverty line and the HIV/AIDS prevalence rate is 16.2% among 15-49 year-olds (UNDP, 2005).

Girls and women in Mozambique have lower socio-economic status, lower levels of educational attainment, poor health and nutrition, constant threat of sexual exploitation and violence, and a higher risk of contracting HIV/AIDS than their male counterparts. Evidence reported by UNICEF (2005) shows that an alarming number of women have an accepting attitude towards domestic violence. As many as 54.1% said that being beaten was justified for stealing food, arguing with their husbands, leaving the house without informing him, refusing sex or not looking after the children. Only 45.2% of Mozambican women have knowledge of HIV prevention methods: 30% of women in the lowest quintile of socio-economic conditions have knowledge of prevention

methods in opposition to 71% in the highest socio-economic quintile. Illiteracy rates are still higher among women than men—68.8% versus 36.7% in 2003—and even higher in rural areas, where 80.3% of women are illiterate. An analysis on the country's slow progress in addressing the MDGs indicates that it is unlikely that Mozambique will reach the third goal of gender equality and women's empowerment. According to UNDP, one of the main challenges is still the burden of girls' and women's domestic and seasonal labour, exacerbated by the impact of HIV/AIDS (2005).

3.2 Build a Better Bicycle (BABB)

BABB is conceived to empower rural women through micro-financed access to appropriate bicycles. Its approach is two-pronged, as it encompasses bicycle delivery through an empowerment methodology. By improving access to levers enabling individual empowerment, BABB encourages a power shift without radically upsetting traditional community structures.

Poor rural households are particularly impacted by the country's low performance in social development. The national policies for rural development continue to be excessively sectoral. Even though 80% of the population is rural, the absence of infrastructure in education, health and transport systems is remarkable (Vala, 2005). The BABB project design process considered policies derived from the country's Poverty Reduction Strategy Paper such as the Program for Rural Women Development which focuses on improving women's access to education, safe water and income-generating activities. BABB's approach is also harmonised with the Reform Program in Agriculture and the National Strategic Plan to combat HIV/AIDS.

BABB has worked to raise awareness within the Mozambican Government about the importance of transport policies that target specific needs of rural women through a multi-sectoral approach that impacts not only on women but broadly on the household and on the community. Recent research on determinants of primary school enrolment in Mozambique evidences that girls whose families have a bicycle and use it to collect water have a 32% higher probability of enrolment than girls in rural areas whose families do not use a bicycle for chores (Cummings, 2006).

BABB works through local community-based organisations (CBOs), involving the community in decision-making about primary target groups, the price of the bicycles and the credit scheme through which they will be paid. This participatory planning constitutes the first stage of BABB's empowerment framework. Besides defining central aspects of the project, empowerment activities also lead women to discuss broader issues that impact their lives. The methodology relies on community discussion groups launched through existing CBO structures. Passive facilitators provide access to existing national material or campaigns on health information. They also encourage women themselves to choose discussion topics and to share personal stories and experience, leading to confidence-building. BABB's methodology has been adapted to different social contexts of female beneficiaries, such as activists within home-based care projects that focus primarily on women affected by HIV/AIDS, or projects with orphans and vulnerable children.

While strengthening bonds between women, BABB's methodology reflects on empowerment as a process that occurs through personal, close relationships and collective spheres of action. By developing a sense of self and individual confidence and capacity, women achieve the ability to negotiate and work collectively to achieve a more extensive impact than each could accomplish alone (Rowlands, 1995; Mayoux, 2005).

BABB's methodology includes a comprehensive M&E system measuring the projects' impact on access to social facilities and economic opportunities, as well as political activities in the community. The M&E indicators focus on health care, safe water, education, income-generating activities, community activities, and women's self-perception of empowerment (see annex). Most of the indicators are consistent with the design of the national Demographic and Health Survey, making it possible to compare project findings with results at the provincial and national levels and to analyse rural women's quality of life from a multi-sectoral perspective.

BABB's principle concern is providing bicycles appropriate to the rural context of the project's female beneficiaries. Bicycles available in Mozambique are mostly imported from China, India or Bangladesh, without appropriate specifications for rural use. Most are of exceedingly low quality. In recognition of existing market issues and drawbacks, BABB proposes to import a mix of second-hand bicycles from partners such as Bicycles for Humanity, and new bicycles from

suppliers in USA, UK and Japan. The new bicycles fulfil the technical specifications required: single-speed, chainring gears for multi-terrain use, off-road tires, easy-to-repair steel frame, limited moving parts, robust coaster brake assembly, standard high capacity luggage rack behind the seat post and dropped top tube. BABB also proposes to set standards for appropriate parts and tools, acting as a point of reference for the refurbishment of the project's second-hand bicycles which will be carried out by trained and equipped mechanics from the communities.

BABB's projected bicycle provision has some limitations. Among donated bicycles there are diverse models and spare parts, some of which will not lend themselves for easy conversion to BABB's ideal technical specifications. Also, it may not always be possible to find capable individuals in the community who are willing and ready to be trained as mechanics, and maintenance is an essential element of BABB's goals. Alternative strategies should be considered to manage these risks.

BABB bicycles will be available at a subsidised cost to beneficiaries—adjusted in accordance to local levels of income and expenditure—and will be available through a credit scheme. This is an important mechanism that creates room for ownership, but is based on the assumption that women are willing to enrol in a credit scheme. Although the bicycles themselves will be subsidised, the cost will still be substantial for women in extremely low income situations. Their decision to enrol in the credit scheme will depend on their capacity to visualise this as an investment to improve their livelihoods.

BABB's design rests on the crucial assumption that bicycles are levers for women's empowerment. But as an asset, a bicycle can create intra-household disputes. In many cases men are in control of household assets, defining who, how and when they will be used. Besides, what cannot be ignored is that women's decisions regarding the use of their bicycle may, at times, reinforce existing roles in the family, replicating gender inequality and not working for wider change. To be effective and sustainable, BABB has to bring this discussion to its empowerment methodology, giving women the opportunity to share their experiences and help them to find their own solutions.

Section 4: Conclusion

Although women play a major role in social, economic and political development, their needs are still ignored or under-valued in the transport sector. This is particularly true in rural areas, where development interventions for transport tend to perpetuate asymmetric power relations between men and women. The convergence of women's empowerment and transport theories illustrates that transport is not gender-neutral. Therefore, development initiatives must target specific groups to deliver customised and appropriate solutions. In recognising that transport burdens in rural communities fall disproportionately on women, policy-makers and practitioners must provide them with solutions to secure access to appropriate, affordable and sustainable means of transport.

By examining recent bicycle projects in sub-Saharan Africa, it was possible to identify the main challenges surrounding their planning processes and provision of their bicycles and services within these interventions. The analysis demonstrated that the provision of bicycles for community empowerment should consider:

- a. gender analysis as inherent to any development intervention;
- b. comprehensive M&E systems providing social assessment of rural women transport needs and roles, and implementing mechanisms to provide systematic information on the bicycles' impact;
- c. participation of different stakeholders, principally the beneficiaries;
- d. implementation of mechanisms to assure ownership; and
- e. building mechanical skills at the community level to support the project and amplify its impact.

From this perspective, BABB emerges with an original and innovative approach that brings together successful principles of bicycle projects with a women's empowerment framework. Even though its design process considered lessons learned from other bicycle projects, BABB still faces major challenges, predominantly with reference to empowerment issues. Women must not only be willing to be empowered but also be able to reverse their roles in the household and community level, strengthening their voice and making their own decisions about the course of their lives.

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Websites

BEN Namibia - <http://www.benbikes.org.za/namibia/>

BEN South Africa - <http://www.benbikes.org.za/>

Bicycles for Humanity - <http://www.bicycles-for-humanity.org/>

CCE - <http://www.centrecycling.com/>

FABIO - <http://www.bspw.org/fabio.html>

ITDP - <http://www.itdp.org>

Practical Action - <http://www.itdg.org>

Village Bicycle Project - <http://www.pcei.org/vbp/>