

# Mountain access brings benefits, but at a cost



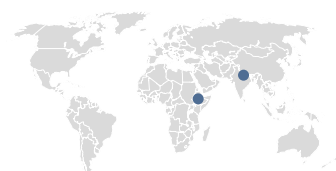
Gary Taylor

Due to difficult physical access, remoteness and isolation defines daily life for most people living in the mountainous areas of sub-Saharan Africa and Asia. Recent rural road programmes, for example in Ethiopia, have demonstrated the positive effects of improved rural road infrastructure on poverty alleviation and food security, but also revealed remaining financial and technical challenges.

People walking to market with their animals on a rural road in Hintato, Ethiopia (P. Starkey)

Because of the lack of roads and transport services, the majority of the rural population in the mountains of Ethiopia are heavily dependent on traditional means of transport, primarily walking and the use of animal transport. Investing in motorable roads to open up access to these areas can bring about dramatic improvements to the local economy. But investing in the construction of rural roads to connect small scattered communities is both costly and technically challenging. For the investor, the problems are twofold. First, there is no general agreement on how to establish the appropriate technical standard of road to be provided. In mountainous areas providing motorable access of even a basic level can be technically difficult and expensive. Second, and critically, there is a lack of evidence linking the level of investment to the likely benefits.

The UK-funded Ethiopian Rural Travel and Transport Project (ERTTP) has provided some answers but challenges remain [1]. This project was carried out in eight *weredas* (districts) in different regions of Ethiopia using a local-level planning approach. The immediate changes brought about by providing reliable motorable access were significant, particularly in areas without previous access. The table gives some examples of the changes in travel times.



*“I used to travel to Wukro on foot and spend more than a day bringing commodities to sell. As a result of the road that connects our village, Gebra Kidana, to Atsbi, I can now pay 8 birr for the bus journey and it now just takes me one hour to get there!”*

Words of Tesfaye, a retailer from a rural market in an ERTTP Wereda

Reduction in travel times as a result of road construction			
Route	Wereda	Before	After
Dera to Indaselassie	Atsbi Wenberta	5–5.5 h walking	25 min motorized transport
Jaragedo to Mekaneyesus	Estie	12 h walking	2.5 h motorized transport
Sheboka to Bako Market	Bako Tibe	2 h	30 min
Toba to Fofa market	Yem	12 h round trip	2 h round trip

## Lessons learned

### Selected impacts of road construction in Ethiopia [1]

#### Increased agricultural production

The construction of the Daleti–Oda Bildigulu road has provided an incentive to farmers to increase the production of sesame and other products for the market. Prior to the construction of the road (2003/04), the production of sesame was 20 quintals (2 000 kg) per farmer. After the construction of the road (2007/08), it increased, sixfold, to 120 quintals (12 000 kg).

#### Rise of farm gate prices

With the construction of the Atsbi–Edaga Hamus road, the farm gate prices increased more than threefold, especially for tomatoes and vegetables. The farmers also stopped carrying their produce to the markets since businessmen came with their trucks to buy directly from the farms. This increased the farmers' bargaining power and confidence.

#### Expansion of micro-finance institutions (MFIs)

Due to the new road access, the number of *kebeles* served by MFIs in Bako Tibe *Wereda* increased from 5 to 30 and the number of households receiving credits increased from 1 245 to 3 933. Over 450 of the loans were to female-headed households.

#### Improved access to health care

The construction of rural roads in Oda Godere *Wereda* improved access to pre- and post-natal care, as well as for emergency medical attention. On average, three expectant mothers used to die per year due to complications resulting from lack of access to medical services. In the years immediately after the improvement of the roads and the introduction of public transport services, no deaths occurred.

Current road investment appraisal procedures are not designed to address step changes in rural access such as those illustrated in the table above [2]. This is because these large reductions do not result in a simple pro-rata increase in traffic. Opportunities arise and journeys are made that previously were not possible. Moreover, traders may start visiting farms to buy produce, reducing the need for farmers to travel to markets. The social and economic changes brought about by these large reductions in travel times are far-reaching and typically occur over decades, as farming practices change and market linkages are developed. For example, in Eastern Nepal, the provision of motorable access to the Kosi Hill Area transformed a once food-deficit area to an exporter of agricultural products. However, this process has so far taken over 30 years [3]. Nevertheless, an evaluation of the ERTTP in Ethiopia revealed some of the changes that started to occur only a few years after the improvement of access. The potential of improved access to transform the social and economic situation of mountainous areas is widely appreciated. However, the lack of accepted methods for appraisal means for the time being major investment decisions are often politically driven.

There are numerous examples of major national programmes to improve access to rural areas, including hill and mountainous areas. The ongoing Universal Rural Road Access Programme in Ethiopia will eventually improve over 70 000 km of rural road to connect all *kebeles* (sub-districts) with an all-weather access at an estimated cost of US\$ 1.3 billion [4]. In India, the large Pradhan Mantri Gram Sadak Yojana (PMGSY) programme is improving over 700 000 km of local roads to connect rural villages at an estimated cost of US\$ 52 billion [5, 6]. Although the initiation of both programmes depended to some extent on technical and economic studies, the investments were ultimately driven by high-level political decisions. The lack of robust evidence to substantiate investments in rural access is one of the key areas being addressed by the UK-funded Research in Community Access Partnership (ReCAP). However, until more robust evidence becomes available, high-level political will may continue to be the major driver of investments in rural access.

- The provision of access to mountainous areas can dramatically transform the rural economy. However, the benefits may take many years to be fully realized.
- Successful programmes to improve rural access depend heavily on decentralized planning and implementation.
- Due to the current lack of robust evidence linking investment costs to benefits, major decisions on public investments in rural access to mountainous areas continue to depend heavily on political will.



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This case study is part of the publication *Investing in sustainable mountain development: Opportunities, resources and benefits*. The publication looks at investments from the perspective of sustainable development. It presents 19 case studies from mountain regions around the world, covering efforts by diverse public and private actors, and ranging from classic examples of development investments to innovative financing mechanisms specifically tailored to the local context and conditions. The publication concludes with specific messages on mountain development, addressed to policymakers.


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