Connecting West Africa: The Trans-Sahelian Highway

Roads are integral to West Africa's economic development. They promote local, regional and international trade by enabling goods to move from areas of production to markets. They allow countries to export their produce through the region's ports, and to import the items they need to prosper. Well-maintained, paved roads also mean that food can be moved around more quickly, vital during the droughts that threaten parts of the region. And roads are the main channels through which people move from place to place.

But many roads in West Africa are in a poor condition, often little more than dirt tracks. This slows down the vehicles using them, hampering growth and development. Improving and extending the road infrastructure is a regional priority.

The Trans-Sahelian Highway, also known as the Dakar–N'Djamena Highway, is route number 5 in the Trans-African Highway Network. It forms a strategic link through Senegal, Mali, Burkina Faso, Niger, Nigeria, Cameroon and Chad, connecting five capital cities – Dakar, Bamako, Ouagadougou, Niamey and N'Djamena – and countless towns and villages in between. It connects to the N'Djamena to Djibouti highway (route number 6), forming a connection right across the continent. The roads branching from it link remote northern Sahelian regions to their capitals and to each other. They also connect the landlocked countries in the heart of West Africa to the ports along the coast. This boosts economic integration in the Economic Community Of West African States (ECOWAS).

Between 1994 and 2010, the Islamic Development Bank (IsDB) provided financing to upgrade several sections of the Trans-Sahelian Highway in Senegal, Mali and Burkina Faso. This brief looks at the economic and social impacts of four of these. In total, IsDB provided about US$43 million for these four projects.

“We want to thank the Islamic Development Bank for supporting social and economic development in our country”

Jean Bertin Ouédraogo, Minister of Infrastructure, Road Development and Transport, Burkina Faso
The Trans-Sahelian Highway

**Saraya, Senegal, to Kita, Mali**
- The 30 km Saraya–Falémé River (Mali border) section in Senegal was completed between 2007 and 2008, with IsDB providing financing of US$11.08m out of a total cost of US$16.79m (66 per cent).
- The 39 km Sékokoto–Kita section in Mali was completed during 2008–09, with IsDB providing financing of US$10.44m out of a total cost of US$16.79m (62 per cent).
- Bus services from Kenieba to Bamako increased from 1 weekly service before the road was built to around 20 services a day.
- Journey times from Kenieba to Bamako reduced from over 28 hours to 5 hours.

**Kaya to Dori, Burkina Faso**
- This 164 km road was built during 2004–10.
- IsDB provided financing of US$8.27m out of a total cost of US$39.8m (21 per cent).
- Vehicle numbers almost doubled from 1,626 vehicles per day in 2007 to 3,222 in 2011.
- The rise in the number of trucks per day – from 118 in 2007 to 214 in 2011 – indicates an increase in trade between Niger and Burkina Faso.

**Dialakoto to Kedougou, Senegal**
- This 158 km road was built during 1996–98.
- IsDB provided financing of US$8.68m out of a total cost of US$40.07m (22 per cent), with the remainder provided by the European Development Fund, the Saudi Fund and the Government of Senegal.
- The road construction provided 350 jobs, and traffic increased by 265 per cent between 1996 and 2002.

**Sikasso, Mali, to Burkina Faso border**
- This 45 km road was built during 2001–03.
- IsDB provided financing of US$8.4m out of a total cost of US$9.36m (90 per cent).
- Traffic increased from an average of 109 vehicles per day in 1999 to an average of 198 vehicles in 2013.

**Mali border to Bobo-Dioulasso, Burkina Faso**
- This 131 km road was built during 1994–98.
- IsDB provided financing of US$6.67m out of a total cost of US$38.17m (17 per cent).

*This brief looks in more detail at the road sections financed by IsDB between Saraya (Senegal) and Kita (Mali), Sikasso (Mali) to the Burkina Faso border, the Mali border to Bobo-Dioulasso (Burkina Faso) and Kaya to Dori (Burkina Faso).*
Map for illustrative purposes only.
Saraya in Senegal to Kita in Mali

As a landlocked country, Mali needs reliable access to ports in other countries to export its produce and import goods. Much of this trade currently passes through Dakar, the capital of Senegal, which is a major port on the West African coast. Improving the infrastructure that links the two countries enables Mali to increase its export earnings, while Senegal benefits from more business in its ports.

During 2007–08, IsDB provided financing of US$11.08m to upgrade a 30 km section of the 50 km road between Saraya and the Falémé River in south-east Senegal. This included the construction of a bridge across the river, funded by the Japan International Cooperation Agency. IsDB also helped to fund an upgrade to the 39 km section between Sékokoto and Kita in Mali, providing financing of US$10.44m. Later, the African Development Bank, ECOWAS and other funders financed the section between Sékokoto and Falémé. Together, these projects completed a paved 312 km road from Saraya to Kita in south-west Mali, which also completed the paved route from Dakar to Bamako.

The road provides a second paved link between the two countries. A northern corridor passes through Kidira in Senegal and Kayes in Mali, but this southern route is 200 km shorter. At present, transcontinental vehicles conveying goods still use the longer northern corridor, as there are no customs checkpoints on the Saraya–Kita road. These will be installed in 2014, when this shorter route is expected to carry most of the long-distance traffic. But the road has already stimulated the local economy.

People living in the border regions of south-east Senegal and south-west Mali have historically traded livestock, particularly cattle and sheep, to restock herds and exchange animals for breeding purposes. Agricultural commodities including groundnuts from Senegal and rice from Mali are also traded. The Saraya–Kita road allows small-scale traders to move their goods more quickly and reduces transport costs, making it easier to expand their businesses.

The faster route has even created new business opportunities. Mali now imports fresh seafood from Senegal, as the reduced journey time means that it does not spoil during transit. There are social benefits too. Friends and families meet at markets, reinforcing long-standing cultural bonds that often date back to when both countries were part of French West Africa.

A lack of infrastructure prevents development; people must be able to move

Mamadou Naman Keita, head of national roads, Ministry of Equipment and Transport, Mali
A town transformed

The town of Kenieba is tucked away in south-west Mali, near to where the borders of Guinea, Mali and Senegal meet. Before the Saraya–Kita road was built, it was an isolated outpost: the journey to Bamako, along the dirt road via Kayes, could take up to a week in the rainy season. But the new road has improved connections to the town and reduced the journey to around five hours. This has opened up a host of opportunities to residents.

Farmers in the surrounding villages are shifting away from subsistence agriculture. With better access to markets, they can increase their production of crops such as apples and groundnuts and sell them in Kenieba or Bamako.

And more money in local pockets means more customers in the town’s market. This has grown rapidly in the last couple of years, driven in part by an influx of small-scale Senegalese traders crossing the border to sell oil, salt and fabrics. A wider range of items is now available in the market, including furniture, for which people used to have to travel to Kayes. A new market place is being constructed to accommodate this expanding trade.

The road is not only being used to transport goods. Public buses between Kenieba and Bamako have increased from one irregular service a week to over 20 buses a day. Passengers never have to wait for more than two hours during the day. And shorter journey times mean the bus companies have reduced prices from CFA 11,000 (US$23) to CFA 6,000 (US$12.50), allowing more people to travel. Passenger numbers now top 1,000 on some days.

Many people appreciate this improved service. Civil servants can attend meetings in Bamako and get back on the same day, and more high-level ministers and officials are travelling to Kenieba. Regional meetings with officials from Guinea and Senegal, which are often held in Kenieba, are easier to organize. And students can easily study in Bamako and return home at weekends.

Better roads encourage private-sector development as well. The nearby Gounkoto gold mine, which opened in 2010, uses the road to bring in fuel and other supplies. And while the gold is exported by air for security reasons, miners can travel to Bamako at weekends, making Kenieba a more attractive place to live. Meanwhile employment opportunities are created as small businesses set up to serve the mine workers.

All these changes have taken place despite the road not yet carrying heavy traffic between Senegal and Mali. When this happens later in 2014, Kenieba is likely to see yet more development. “If you asked people ‘where is Kenieba?’ a few years back, you would see a blank face,” says Koulmoko Diallo, the manager of Diarra Transport, one of many companies enjoying a boom in business. “But now, people know us. This is just the beginning; who knows how Kenieba will grow?”

‘People have been waiting for this for a long time’

Bogali Coulibaly, technician, Ministry of Roads, Kenieba Division, Mali

Diarra Transport is one of many companies which have started to run daily services to Bamako.
Sikasso in Mali to the Burkina Faso border

Sikasso, Mali’s second largest city, lies in the heart of the country’s south-eastern ‘green belt’. This is a rich agricultural region that produces much of the rice, potatoes and vegetables that feed the country. It is also one of West Africa’s major cotton-growing regions. These products need to get to markets – local, regional and international.

During 2001–03, IsDB provided financing of US$8.4m to surface the rough gravel road from Sikasso to the Burkina Faso border. Although it is just 45 km in length, this is a significant link in the Trans-Sahelian Highway. Previously, large vehicles travelling from Sikasso to Burkina Faso had to take a detour via Koutiala, 120 km to the north, as the gravel road was often unusable, especially during the rainy season. This direct route reduces the journey time from four hours to just 45 minutes.

**Increasing economic integration**

The road was the final section needed to complete the paved route all the way from Bamako to Ouagadougou. This connects Mali to the ports in Ghana, Togo and Benin, providing an alternative to Dakar for importing and exporting goods.

Diversifying points of entry is strategically important for landlocked countries. Past experience has shown that West Africa can, at times, be relatively unstable, and conflict and political turmoil can flare up quickly. When these occur in coastal countries, it can hold up the movement of goods to and from Mali. Abidjan in Côte d’Ivoire used to be Mali’s major point of export, but during the 2000s it was repeatedly closed during that country’s civil war. This even delayed the building of the Sikasso road.

Since completion, the Sikasso–Burkina Faso road has seen an 82 per cent increase in traffic. About 40 per cent of this is trucks and lorries loaded with second-hand cars, food commodities and electrical items imported at Lomé, or carrying fuel from Cotonou. Having unloaded their cargo in Mali, they return with locally produced cashews, cotton, shea nuts and coconuts to be exported.

*The road allows the produce from around Sikasso to be distributed around Mali and beyond – essential for the economy and people in this region*

Boubacar Samake, director of roads, Sikasso, Mali
Mr Diassana, one of many residents in Farako who has benefitted from the improved road between Sikasso and the border.

Getting to the city

The new road is encouraging Sikasso to expand along its south-eastern axis. In the last two years, four new petrol stations have been built and the city’s technical college has set up a campus along the road. The communities living nearby are also seeing positive changes.

Farako is one of ten villages through which the road passes. The increase in traffic has helped local businesses, providing a welcome boost after the village’s tea factory closed four years ago when the owner sold up. But according to Dabire Diassana, who runs a motorcycle-repair business in the village, the most significant change has been better access to the facilities in the city.

“Our children can go to college in Sikasso,” he says, “and we have access to a wider range of medical facilities.” Farako has a small community health centre, but serious cases are referred to the large, well-resourced hospital in Sikasso. The reduced journey time can even save lives, for example if there are complications when women give birth. “We can get there in just 20 minutes by motorcycle now,” says Dabire. “It makes a huge difference.”

Policing the border

Upgrading the Sikasso–Burkina Faso road was an opportunity to speed up border controls on the Malian side. Previously, the different control points were spread out along the road, meaning a series of time-consuming checks for the few vehicles passing through. But they are now all in Heremakono, a village on the border.

This makes the process more efficient, says Sergeant Ajita Osman Samake, the chief of the police at the border. “We get up to 200 vehicles passing through each day,” he says. “And now the customs, police and border checks are all in one place, drivers pass through much more quickly.” This is important for the region’s trade. The time spent on numerous checks, plus the need to pay bribes at times, is a constant complaint from freight companies working in West Africa.
The Mali border to Bobo-Dioulasso in Burkina Faso

Like Mali, Burkina Faso is a landlocked country and its road network is vital to the economy. In 1994, IsDB provided financing of US$6.67m to surface and widen the road that runs from Bobo-Dioulasso, Burkina Faso’s second largest city, through the town of Orodara, and to the Malian border. This has certainly helped to increase trade between Mali and Burkina Faso, and road users and nearby communities have seen a range of positive impacts.

For lorry drivers, the main benefit is a faster, safer journey. It only takes them two or three hours to travel the 75 km from Bobo-Dioulasso to Orodara (it is just an hour for cars and motorbikes). This used to take up to a day or more, and drivers who set off late often had to sleep under their trucks rather than risk driving in the dark on a rough, potholed road. This was uncomfortable and unsafe, with a constant threat of being robbed or hit by passing vehicles. But now they can do a return trip in a day, which is not only safer, but also means they can earn more money.

Dienka, a town about 25 km from Orodara, has grown exponentially in the 16 years since the upgrade was completed. Traore Kalifa, 57, was one of the first people to settle here 35 years ago. “When I came, there were just three families living here,” he says. “I don’t know how many there are now!”

The growth is evident, however, in the large market that spreads across both sides of the road. Over 100 people now earn a living here, and Mr Traore runs a shop selling a mix of spare parts for motorbikes and agricultural chemicals. Business has improved since the road was upgraded, with traffic now passing through the town 24 hours a day. This is in stark contrast to the trickle of passengers he saw in the past.

There is another advantage: “If I need something for my shop, or a customer needs a certain part, I can get into Bobo in just 30 minutes on my motorbike,” he says. “It used to take me around two hours.” A faster service means satisfied customers – and that is always good for business.

There is one downside to the increased traffic, however, with occasional collisions between vehicles and people crossing the road. But these are very few, thanks to speed bumps at either end of the village.

Taking mangoes to market

As well as facilitating international and regional trade, the road provides a faster connection between south-west Burkina Faso and the rest of the country – a key route for national trade. The soils in this area are the most fertile in the country, and the farms here produce pearl millet, rice, sorghum and maize, as well as cash crops such as sugar cane. Orodara, a town near the Malian border, is the centre of Burkina Faso’s largest fruit-growing region.
The journey from Orodara to Ouagadougou now takes just seven hours. (IsDB has also helped to fund the upgrading of the route from Bobo-Dioulasso to Ouagadougou, providing a paved route all the way to the capital.) The quicker journey time is significant: fruit and vegetables are perishable and need to be moved quickly, and the improved road means they are still fresh when they arrive at market.

Getting crops to the less fertile areas of Burkina Faso is imperative for the country’s food security, moving supplies from the wet south to the semi-arid northern regions. The cost of transporting produce to markets is lower as well, meaning the food is less expensive in markets. Farmers also benefit from the cheaper and more readily available fertilizers and pesticides – all enabled by better transport connections.

Kansolet Yvette is a regular user of the road. For 15 years she has driven a lorry to Orodara from Ouagadougou to buy mangoes, one of the many fruits farmed here. She then sells them on to market traders in the capital. “The mangoes are much cheaper here,” she says. “With one lorry load, I can make a profit of up to CFA 100,000 (US$208), depending on the price in Ouaga.”

The only problem is when you leave the main road. “The tracks to the villages are in a poor state,” she says. “A lot of the fruit grown there doesn’t get sold, because of the problems with transporting it.” This not only wastes an important source of food, but also means a loss of economic assets for the country. And it is a reminder that, despite considerable progress, West Africa’s road networks still need to extend further.

Trains, planes and boats

Roads are not West Africa’s only transport infrastructure, but there are problems with the alternatives. Trains cover just a limited area and services are slow and under-funded: the major regional railway, from Dakar to Bamako, barely operates at all these days. The region’s main waterway, the Niger River, is too shallow to carry large cargo ships, allowing only seasonal transport for smaller craft. And the aviation network, while growing steadily, is still too small to meet the region’s needs. There are tentative plans to upgrade the railway in places, including from Dakar to Bamako, but for now the road network is the priority.
Kaya to Dori in northern Burkina Faso

IsDB’s support to road building in West Africa extends beyond the main route of the Trans-Saharan Highway. During 2004–10, IsDB was one of several donors to support the upgrading of the 164 km road between Kaya and Dori, two towns in Burkina Faso’s Sahel region. IsDB provided US$8.27m.

Just as the Saraya–Kita road provides a second major link between Mali and Senegal, this branch axis of the Trans-Saharan Highway provides a northern corridor from Ouagadougou to Niamey. The improved road reduces the journey time between Kaya and Dori from up to ten hours to two hours; journey times from Dori to Ouagadougou reduced from over a day to just four hours.

It also connects the bordering regions of Niger and Burkina Faso. One place this benefits is the region around Tera, where much of the Niger’s agricultural production takes place. One of the key export markets for crops grown here is northern Burkina Faso (a new road connects Tera to Dori as well). The Kaya–Dori road provides a much shorter journey from Tera; goods used to come via Ouagadougou and Niamey, taking several days.

Secondary benefits

Road-building projects are major undertakings, and it makes economic sense to include other infrastructure at the same time where appropriate. The Kaya–Dori road crosses two rivers and the construction of dams was included in the project design.

There has been a dam on the Yalgo River, a tributary of the Niger River, for over 30 years. But the new dam that carries the Kaya–Dori road is about 2 metres higher, increasing the amount of water that can be held in the reservoir it creates. This is important for people in the town of Yalgo, just north of the dam. The reservoir enables them to water their livestock and grow rice and vegetables, providing a secondary source of income during the dry season, when their maize and sorghum farms are idle. The increased capacity helps to meet the increasing demands on the reservoir as well, not least from a nearby gold mine that has recently started pumping water.

Mare Alimata uses water from the reservoir for the tomatoes, lettuce and aubergines in her vegetable garden, which she then sells in Dori (an easier journey thanks to the new road). As there is water in the reservoir for a longer period, she can increase the growing season in her garden.

But the road has made an even bigger difference to people in Yalgo, she says. “Before the road was built, we couldn’t travel when the river was flooded. It was dangerous and some people drowned trying to cross it. Now we can travel to and from Kaya and Ouagadougou all year round.”
Maintaining the roads

The Trans-Sahelian Highway is built to last: the sections funded by IsDB have been constructed to the latest standards in road design. But they still suffer damage as cracks and potholes form in the surface. These can expand quickly if water gets in and scours out the road's foundations.

Haulage companies often put as much as possible onto trucks to maximize the revenue from each journey. This is a problem: while all vehicles can cause cracks, the wear and tear caused by one overloaded vehicle can be nearly 20 times that of properly loaded vehicles. The roads are designed to carry vehicles up to a weight of 13 tonnes, but it is likely that many exceed this. Overloaded vehicles are also more dangerous to other road users, needing longer to brake and being unstable if the load is unevenly spread.

This problem is going largely unchecked due to the lack of stations to measure axle loads (the total weight of the vehicle divided by the number of axles). This was highlighted as a concern in the project post-evaluation reports for all four of the roads featured in this brief. But building more axle-loading stations is not simple. Understandably, lorry drivers are not keen on more checks that delay their journey, neither are the companies that currently exceed weight limits. However, the Government of Mali is negotiating with haulage companies regarding the placement of more checkpoints in the country to try to address the problem. And the construction of a vehicle-
weighing station is compulsory for all new road projects in Burkina Faso.

There are plans to increase the routine maintenance of many sections of the Trans-Sahelian Highway. The Government of Mali recently set up a national programme to collect tolls for regular maintenance work – a condition of donor funding. Burkina Faso has also established a government fund, worth US$29m annually, to keep its roads in a good condition. This will not only ensure that roads are maintained, but also provide some employment opportunities.

It is not cheap: Mali needs about US$104,000 a year to maintain the Sikasso–Burkina Faso road alone.

But work is already underway to improve drainage, thicken the surface and reinforce the revetments on the Sikasso–Burkina Faso road. While IsDB financed the initial construction, the World Bank and the Government of Mali are funding this – an example of the donor collaboration that is vital in large-scale infrastructure projects.

IsDB’s support to Africa

These projects were just part of IsDB’s ongoing commitment to Africa’s development. Others include the five-year Special Program for the Development of Africa, which was completed in 2013 and saw over US$5 billion invested. This included improvements to over 2,500 km of road and the construction of two new airports, among other projects. IsDB has also provided financing of US$1.42 billion towards projects in Africa’s transport sector, and a further US$2.2 billion is being provided to existing transport projects (as of May 2014).

But road building is never finished and there is always a need for more investment. Urgent requirements include better connections to the remote Saharan and Sahelian parts of West Africa to stimulate development. As traffic increases, people want wider roads, including two-lane highways on major routes. And as populations migrate towards cities, there will be an increasing need for more and better urban roads.

The justification for donors is there: roads stimulate economic development very quickly and improve people’s lives in diverse ways. Much of the Trans-Sahelian Highway is now paved, but this is just the start of developing West Africa’s transport infrastructure.
Success factors

- **Demand**: the main factor behind the success of the road-building projects was that they met an urgent demand. West Africa desperately needs roads, so there was political will behind the projects.

- **Funder coordination**: IsDB and other donors provided funds on time and there were no major complications in securing funding from government counterparts. IsDB and other donors worked together, for example through quarterly meetings, to ensure that projects ran smoothly.

- **Good contractors**: the performance of the construction, engineering and consultancy firms used was very good. In the projects where they were not, there were delays; for example, poor performance by contractors on the Kaya–Dori road caused severe delays.

- **Planning**: other development objectives were achieved at the same time through good planning, such as the creation of dams along the Kaya–Dori road.

- **Compensation**: people affected by the road-building projects were compensated. For example, four families on the Sikasso–Burkina Faso road were given new land and homes. These actions helped to prevent local opposition to the projects.

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