



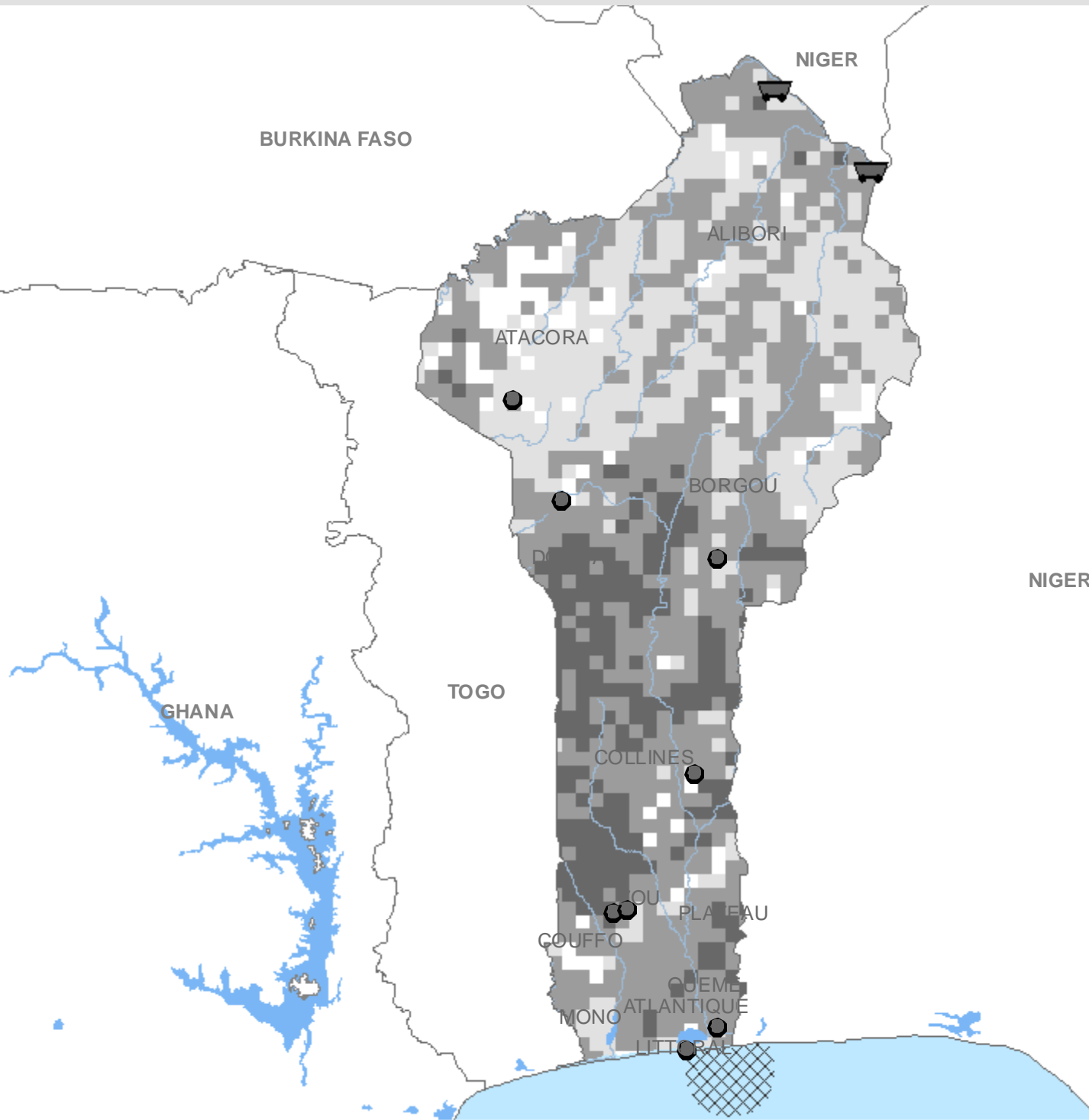


Interactive Infrastructure Atlas





This atlas is a pre-assembled interactive map that allows users to view a series of infrastructure layers for a specific country against backgrounds of population density, poverty, economic or physical geography. The layers, depicting location, quality and condition of infrastructure features can be turned on and off in any combination. While it is possible to turn on all layers at once, the resulting map would be difficult to read.

How to use the Map:




- 1) Click the page down arrow  in the toolbar to go to the map page of the document.
- 2) The first step is to choose a background against which to view the infrastructure layers. Select one of the 4 options (population, poverty, natural resources, topography) at the top of the map page by clicking on the button next to the background type.
- 3) Click on the Layers icon  on the left-hand side of the screen to open the interactive layers feature.
- 4) Click on the box to the left of the Layers icon  **Layers** to see the different infrastructure sectors (ICT, Power or Transportation).
- 5) You can turn on all the layers within a sector by clicking on the box to the left of the sector name. An “eye”  appears in the box when layers are shown on the map.
- 6) To expand the list of layers within a sector, click the “+” next to the sector name. You can turn on one or more layers associated with each sector or multiple sectors by clicking in the box next to the layer name.
- 7) As you select or deselect each layer, you will see the map change. A legend on the right side of the map explains the shading or lines that you see on the map.
- 8) In addition to the existing country-level infrastructure, selected regional features are included as a separate layer for each sector, to provide context. Regional features include existing (solid line) and planned projects (dashed line).
- 9) You can zoom into the map window for viewing, and print the full map window using the tools in the Adobe Reader toolbar. For more information on how to use these tools see please refer to the Help menu above the toolbar.







NATURAL RESOURCES

- Mining**
- Sites: 
 - Potential: 
 - Precious Metals - Diamonds: 
 - Other Metals: 




-  Oil Field

- Cropland Extent**
-  < 10% but High Suitability
 -  10% - 50%
 -  > 50%










WATER



- Current Irrigation (% Area)**
-  < 1%
 -  1% - 5%
 -  > 5%
-  Dams

ICT




-  ICT - International Gateways
-  Fixed Transmission Network
-  ICT - GSM Coverage

POWER







- Power Plants | Type and Capacity (MW)**
- | HYDRO | THERMAL | OTHER | Capacity (MW) |
|--|--|--|---------------|
|  |  |  | < 10 |
|  |  |  | 10 - 100 |
|  |  |  | > 100 |






- Power Lines (KV)**
-  Medium
 -  High









TRANSPORT

- Airports** ('000 Passengers per Annum)
-  < 750
 -  750 - 5000
 -  > 5000

- Ports**
-  Direct
 -  Direct and Transshipment

- Railroad** (Million Traffic Unit per Annum)
- | Operating | Not Operating | Traffic (Million) |
|---|---|-------------------|
|  |  | < 0.5 |
|  |  | 0.5 - 1 |
|  |  | 1 - 2 |
| | | > 2 |

- Road Traffic** (Avg Annual Daily traffic)
- | Traffic | Color |
|------------|---|
| Unknown |  |
| < 100 |  |
| 100 - 300 |  |
| 300 - 1000 |  |
| > 1000 |  |

- Road Type & Condition**
- | Condition | Paved | Unpaved |
|-----------|---|---|
| Good |  |  |
| Fair |  |  |
| Poor |  |  |
| Unknown |  |  |

The following table identifies sources used in the preparation of this map. This list represents our best effort to compile these data, but note that the scale, reference year and reliability vary between layers and countries. The AICD study of the World Bank does not accept responsibility for any errors, omissions, or positional accuracy. It is strongly recommended that users attempt to verify information presented here, or consult original sources, in order to determine suitability for a particular application.

Data Sources: Benin

Theme	Layer Name	Source
ICT	International Gateways	ECOWAS ICT atlas, 2004
ICT	GSM Coverage	GSM Association, Oct 2006
ICT	Fixed Transmission Lines	Hamilton Research Ltd., 2007
ICT	Submarine Cables	Hamilton Research Ltd., 2007
ICT	Regional ICT	AfDB, NEPAD maps, consultation with experts
Power	Power Plants - Types	Platts WEPP database (March 2006), various sources used for georeferencing
Power	Power Lines - Voltage	IBRD map archive #33246, #33245, Jun 2004. WAPP Member Utilities Performance report, 2005
Power	Regional Power	AfDB, NEPAD maps, consultation with experts
Transport	Major Airports - Passenger Volume	DAFIF, with estimates and aggregations made using Seabury ADG data for AICD
Transport	Major Ports - Type	World Port Index, and port indicators database compiled by Ocean Shipping Consultants Ltd for AICD
Transport	Railroad Traffic (million traffic units per annum)	VMAPO and data compiled by Richard Bullock for AICD
Transport	Road Traffic Volume (AADT)	Data compiled by Tecsuit for AICD study (2009), with input from the Service de Banque de Données Routières (SBDR)
Transport	Road Type & Condition	Data compiled by Tecsuit for AICD study (2009), with input from the Service de Banque de Données Routières (SBDR)
Transport	Regional Roads	VMAPO, AfDB Trans-African Highways study, AICD connectivity analysis
Hydrology	African Dams	AQUASTAT Geo-referenced database on African dams, FAO (2006)
Hydrology	Current Irrigation Area	AQUASTAT Global Map of Irrigated Areas, FAO (2007)
Background	Poverty	"Geographic Distribution of Poverty and Vulnerability", based on Benin 2003 CWIQ
Background	Population	Global Rural-Urban Mapping Project (GRUMP) 2005 estimates, CIESIN
Background	Natural Resources	Cropland Extent (2000), Ramankutty et al.; GAEZ plate 56, IIASA; MRDS, USGS; Petrodata, Thieme, Rød, and Lujala 2007
Background	Topography	GTOPO30 global digital elevation model, USGS. Basins, AQUASTAT, FAO