14 Socio-Economic and Community Baseline

14.1 Introduction

This chapter provides a common baseline for subsequent chapters of the SEIA report that address the socio-economic and community impacts of the Simandou Railway. Chapters that utilise this baseline include:

- Chapter 15: National Economy;
- Chapter 16: Employment and Economic Development;
- Chapter 17: In-Migration;
- Chapter 18: Land Use and Land-Based Livelihoods;
- Chapter 19: Social Structures and Community Life;
- Chapter 20: Community Health, Safety and Security;
- Chapter 21: Labour and Working Conditions;
- Chapter 22: Ecosystem Services; and
- Chapter 23: Human Rights.

Where there is additional baseline information specific to individual topics (i.e., in-migration, community health, labour and working conditions, ecosystem services, and human rights), that information is provided in the relevant chapters. It should be noted that this format differs from the approach adopted for the preceding environmental chapters.

This chapter also provides a single overview of legislation and standards that are applicable to the assessment of socio-economic and community impacts and common across the topics covered in Chapters 15 to 23. As with baseline information, legal information specific to individual topics (i.e., labour and working conditions, ecosystem services, and human rights) is included in the relevant chapters.

The remainder of this chapter is organised in the following sections:

- Section 14.2 explains the study area considered in the assessment of socio-economic and community impacts and for which baseline data has been collected;
- Section 14.3 provides an overview of legislation and standards relevant to the topics covered by the assessment, together with a brief summary of a number of policies and programmes in Guinea which contribute to social and economic development;
- Sections 14.4 to 14.12 describe baseline conditions in the study area with reference to the following:
  - Section 14.4: National Economy;
  - Section 14.5: Administrative Divisions, Governance and Leadership;
  - Section 14.6: Demographics and Social Organisation;
  - Section 14.7: Land Management and Tenure;
  - Section 14.8: Livelihood and Economic Activities;
  - Section 14.9: Poverty and Distribution of Wealth;
  - Section 14.10: Social Infrastructure and Services;
  - Section 14.11: Risks and Community-Identified Needs Raised in Data Gathering and Consultation; and
  - Section 14.12: Project Economic and Community Development Programmes.

The baseline information presented in this chapter draws upon a number of existing data sources, studies and surveys that have been undertaken in recent years for the Simandou Project. In particular, the following references have provided a significant amount of information:

- Koppert and Mamadou (2010); Value Enhancement Study: Rail, Road and Port Site – Draft Report, Groupe d’Étude des Populations Forestières Équatoriales;
14.2 Study Area

The proposed Simandou Railway will extend across Guinea over a distance of approximately 670 km and pass through five administrative regions, nine prefectures, and 22 sub-prefectures. From the Simandou Mine site (east) to the Simandou Port (west), these regions and prefectures are: N’Zérékoré (prefecture: Beyla), Kankan (prefectures: Kérouané, Kankan, and Kouroussa), Faranah (prefectures: Kissidougou and Faranah), Mamou (prefecture: Mamou), and Kindia (prefecture: Kindia and Forécariah).

For the purposes of this assessment, the Project study area has been separated into national, regional and local study areas as follows:

- **National Study Area**: the country of Guinea;
- **Regional Study Area**: the nine prefectures crossed by the rail corridor and associated components; and
- **Local Study Area**: the 22 sub-prefectures crossed by the rail corridor and associated components, including sub-prefecture centres and villages within and adjacent to the corridor.

### 14.2.1 Administrative Divisions

Table 14.1 lists administrative divisions in the regional and local study areas. It also shows what sections of the rail run through each administrative division, prefecture and sub-prefecture.
### Table 14.1 Administrative Divisions in the Study Area

<table>
<thead>
<tr>
<th>Administrative Region (Regional Study Area)</th>
<th>Sub-Prefectures (Local Study Area)</th>
<th>Relevant Rail Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>N’Zérékoré Beyla</td>
<td>Nionsomoridou</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Moribadou</td>
<td>9</td>
</tr>
<tr>
<td>Kankan</td>
<td>Kounsonkorou</td>
<td>9, 8</td>
</tr>
<tr>
<td></td>
<td>Kérouané Centre</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Soromayah</td>
<td>8, 7</td>
</tr>
<tr>
<td>Kankan</td>
<td>Mamouroudou</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Tokounou</td>
<td>7</td>
</tr>
<tr>
<td>Kouroussa</td>
<td>Douako</td>
<td>7, 6</td>
</tr>
<tr>
<td>Faranah</td>
<td>Kissidougou</td>
<td>7, 6</td>
</tr>
<tr>
<td>Faranah</td>
<td>Tiro</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Gnaleah / Nialia</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Faranah Centre</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Hérémakono</td>
<td>6, 5</td>
</tr>
<tr>
<td></td>
<td>Sandéniah</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Marella</td>
<td>5, 4</td>
</tr>
<tr>
<td>Mamou</td>
<td>Mamou</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Ouré-Kaba</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Soyah</td>
<td>4, 3</td>
</tr>
<tr>
<td>Kindia</td>
<td>Kindia</td>
<td>3, 2</td>
</tr>
<tr>
<td></td>
<td>Madina Oula</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Kindia Centre</td>
<td>2</td>
</tr>
<tr>
<td>Forécariah</td>
<td>Sikhourou</td>
<td>2, 1</td>
</tr>
<tr>
<td></td>
<td>Moussaya</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Allassoyah</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Maférinyah</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Forécariah</td>
<td>1</td>
</tr>
</tbody>
</table>

### 14.2.2 Natural Regions and Eco-Pastoral Zones

The railway also runs through Guinea’s different natural regions and eco-pastoral zones, which are referenced throughout this chapter. The proposed railway will pass through all four natural regions, including Forest Guinea, (Guinée Forestière), Upper Guinea (Haute Guinée), Middle Guinea (Moyenne Guinée) and Lower Guinea (Basse Guinée / Guinée Maritime). It will also pass through four of seven eco-pastoral zones (Forest Zone, Transition Zone, Fouta South Zone and Maritime Zone). While the natural regions are distinguished by distinct geographic and social characteristics, they do not directly align with the country’s administrative divisions. To clarify the linkages between the natural regions, eco-pastoral zones and the rail corridor, prefectures have been assigned to the regions and zones where they are predominately situated.

**Natural Regions:**

- Forest Guinea (Guinée Forestière) – covers mainly the prefectures of Beyla and Kérouané;
- Upper Guinea (Haute Guinée) - covers mainly the prefectures of Kankan, Kouroussa, Kissidougou, Faranah;
- Middle Guinea (Moyenne Guinée) – covers mainly the prefectures of Faranah, Mamou, Kindia; and
- Lower Guinea (Basse Guinée / Guinée Maritime) - covers mainly the prefectures of Kindia, Forécariah
Eco-pastoral Zones:

- Forest Zone – located to the south of Kissidougou-Beyla prefectures;
- Transition Zone – located between Faranah-Komodou prefectures in the north and Kissidougou-Beyla in the south;
- Fouta South Zone – located between the Télémilé, Kindia and Mamou prefectures; and
- Maritime Zone - located in the Forécariah prefecture.

Further information on eco-pastoral zones is provided in Section 14.8.2 on Animal Husbandry and Pastoralism.

14.2.3 Sections of the Rail Corridor

Within the context of the regional and local study area, this assessment considers socio-economic impacts by rail corridor sections, given the presence of facilities and activities near some communities and not others, resulting in potential differences in impacts experienced by communities. As noted in Chapter 2: Project Description, the rail alignment has been divided into nine sections (from Section 9, which begins at the Simandou Mine, to Section 1, which ends at the Simandou Port) for the purposes of design and assessment. For socio-economic impacts during operation, select communities in rail corridor Sections 9, 6, and 1 are considered to be within sufficient proximity to Project facilities and activities to warrant specific focus in the assessment. These communities, their location along the rail route, and their connection to Project facilities and activities are noted in Table 14.2.

The remainder of the rail alignment (Sections 8, 7, 5, 4, 3, and 2) is relatively rural in nature with low population densities. There will be construction camps within each of these sections, but no further facilities associated with the rail besides the track itself and associated bridges, culverts, tunnels and passing loops. From a socio-economic perspective these sections are therefore considered together and differential impacts between them highlighted only where relevant.

**Table 14.2 Key Communities Along the Railway**

<table>
<thead>
<tr>
<th>Rail Section</th>
<th>Description</th>
<th>Main Communities (Study Area)</th>
<th>Connection to Project Facilities and Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 9</td>
<td>• Begins at the Simandou Mine with a rail loop east of the Simandou Range between Moribadou and Nionsomoridou. Trains will travel around the loop passing through the ore loaders before leaving for the port. A small mine rail yard and maintenance facility will be established immediately to the northwest of the loop for freight and fuel trains servicing the mine. It then extends east through a saddle in the Simandou Range.</td>
<td>Beyla (Regional)</td>
<td>• Closest urban centre to rail yard (21.5 km from corridor) • Location of worker housing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nionsomoridou (Local)</td>
<td>• Closest centre to the rail loop</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moribadou (Local)</td>
<td>• Closest centre to proposed construction camps</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Large town near the rail loop</td>
</tr>
<tr>
<td>Section 6</td>
<td>• Middle of the rail alignment and runs through the eastern plateau, approximately 20 km south of the town of Faranah. A midpoint servicing facility is currently planned to be located in this section, south of the settlement of Sonkonia and the town of Faranah. There are likely to be two passing loops in this section.</td>
<td>Faranah Centre (Local)</td>
<td>• Prefecture chief town (20 km from corridor) • Most populous town between the mine and the mountainous region of Mamou</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Douako and other communities along the road to Faranah and Sonkonia (Local)</td>
<td>• Midpoint maintenance facility is near Faranah</td>
</tr>
<tr>
<td>Rail Section</td>
<td>Description</td>
<td>Main Communities (Study Area)</td>
<td>Connection to Project Facilities and Activities</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
<td>-----------------------------</td>
<td>---------------------------------------------</td>
</tr>
</tbody>
</table>
| Section 1    | • The final 75 km section of the proposed alignment runs approximately 5 km north of the town of Forécariah to the proposed railhead yard and unloading facility.  
• A rail maintenance facility will be established at the railhead yard around 10 km west of Dandayah.  
• There is likely to be a passing loop near the eastern end of the section, north of Moussayah. | Forécariah (Regional) | • Prefecture capital (8 km from corridor)  
• Largest town in the region  
• Centre of economic and development activity  
• Location of worker housing |
|              |             | Maférinyah (Local)          | Subprefecture capital  
• Largest town near the relevant construction camps and railhead yard |
|              |             | Dandaya (Local)             | Closest settlement to a proposed worker camp |

The rail alignment showing prefectures and rail sections is shown in Figure 14.1.

### 14.3 Legal and Other Requirements

#### 14.3.1 Guinean Law

Guinean legislation relevant to the assessment of socio-economic and community impacts includes the following (for further details of the regulations referenced in this section, please refer to Annex 1C: Legislation, Standards and Administrative Framework).

- The Constitution of Guinea (*Loi Fondamentale de la République de Guinée*) establishes the right to private property ownership (both customary and legal) and states that land may not be expropriated unless it is in the wider public interest and accompanied by fair and prior compensation. It also establishes the right to work, establishes the right for social security, the right for children to be protected from exploitation, and provides for state assistance and protection for elderly and people with disabilities.

- The Guinean Civil Code (*Code Civil de la République de Guinée*) defines civil rights and responsibilities relating to the family, parental authority, divorce, child custody and the choice of residence.

- The Land and Domain Code (*Code Foncier et Domanial L/99/013/AN*) reinforces the right of private ownership in accordance with the Constitution and establishes systems of land registration. Customary rights are not explicitly addressed but Article 39 defines land owners as physical persons or legal entities that can demonstrate peaceful, personal, continuous (in excess of thirty years) and *bona fide* occupation of a dwelling as an owner. The Code also requires that compensation for expropriation must be fair and must cover the whole of the quantifiable and known loss incurred as a direct result of the expropriation.

- The Declaration on Land Policy in the Rural Environment (*Déclaration de politique foncière en milieu rural D/2001/037/PRG*) recognises customary rights and sets out proposals to encourage sustainable resource management and allow the development of a transparent and equitable land market. The focus is on clarifying and securing land tenure property rights in rural areas, including increasing the participation of local authorities and stakeholders.

- The Urban Code (*Code de l’Urbanisme L/98 No 017/98*) establishes the Guinean State as responsible for national and regional development plans providing authority at various administrative levels.

- The Code on Local Government (*Code des collectivités locales*) establishes the principle that local communities must be consulted by the State when undertaking projects affecting land.
Figure 14.1
Préfectures, les sections de rail et emplacements indicatifs des fonctionnalités clés
Préfectures, Rail Sections and Indicative Locations of Key Features
The Pastoral Code (Code Pastoral L/95/51/CTRN) defines the general rules and rights relating to traditional livestock farming in Guinea. Areas of forestry and fallow land may be used as pasture resources subject to the permission of the property owner and any measures needed to protect the environment. The Code also sets out that any development project in the rural environment must take into account the interests of traditional livestock farming.

14.3.2 International Standards

Guinea is a signatory to a number of international agreements relevant to socio-economic and community issues, including the following (for further details see Annex 1C: Legislation, Standards and Administrative Framework):

- the UN Convention on the Elimination of Discrimination Against Women (CEDAW): Guinea’s National Policy for the Advancement of Women was developed in 1996 to support women’s economic advancement, facilitate their family, social and cultural role and to improve their status in society;
- the Convention on the Rights of the Child, ratified in 1990; and

A number of other relevant international conventions and agreements are identified in Chapter 21: Labour and Working Conditions and Chapter 23: Human Rights.

The assessment of socio-economic and community impacts has also been undertaken in line with international guidance on social impact assessment, including:

- IFC Social and Environmental Performance Standards (2012) including:
  - PS 1: Assessment and Management of Environmental and Social Risks and Impacts;
  - PS 2: Labour and Working Conditions;
  - PS 4: Community Health, Safety, and Security;
  - PS 5: Land Acquisition and Involuntary Resettlement; and
  - PS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; and
- IFC Good Practice Note No 3 – Assessing the Social Dimensions of Private Sector Projects.

PS 7: Indigenous Peoples has not been considered as relevant, as there are no indigenous peoples in the study area according to the characteristics as defined in the standard.

14.3.3 Rio Tinto Standards

A number of Rio Tinto policies and standards are relevant to socio-economic and community issues.

Rio Tinto’s Communities Policy states: ‘We set out to build enduring relationships with our neighbours that are characterised by mutual respect, active partnership and long term commitment. Mutual respect depends on our understanding the issues that are important to our neighbours and our neighbours understanding what is important to us. Wherever we operate, we do our best to accommodate the different cultures, lifestyles, heritage and preferences of our neighbours, particularly in areas where industrial development is little known. Our communities and environment work is closely coordinated and takes account of peoples’ perceptions of the effects and consequences of our activities.’

Rio Tinto’s global Communities Standard defines requirements with which all global operations must comply, covering:

- communities multi-year planning (MYP);
- socio-economic knowledge base;
• social risk analysis (SRA);
• mutually acceptable consultation and engagement procedures;
• community contributions, activities and targets;
• cultural heritage;
• resettlement of communities;
• legally binding agreements with communities;
• complaints, disputes and grievance;
• compensation;
• trusts, funds and foundations;
• human rights; and
• indigenous peoples.

Audits to assess compliance with the Communities Standard are undertaken by trained Rio Tinto staff from other operations. Following an audit, action plans are developed to address any non-conformance identified. Progress is then tracked monthly on site and biannually by the Rio Tinto head office.

A Social Impact Assessment Guidance document provides guidance to managers on social impact assessment in keeping with the Communities Policy and Communities Standard.

Guided by these standards, the Simandou Project has established the following vision and goals:

• to implement Rio Tinto's health and safety, environment, community, engineering, human resources and operating standards in a way that positively transforms the way large mining projects are conducted;
• to work with the Guinean government and people and other partners to make sustainable and equitable improvements to the quality of life of Guineans and build thriving local communities;
• to profitably and responsibly develop the Simandou resource in a way that maximises value for shareholders and Guinea;
• to build enduring relationships with local communities, which are characterised by mutual respect, active partnerships and long-term commitment; and
• to contribute to a sustainable regional economy in partnership with the Republic of Guinea.

14.3.4 Guineaan Development Policies and Programmes

In partnership with the international community, Guinea is participating in two key programmes relevant to current and future baseline socio-economic conditions: the Poverty Reduction Strategy and the Village Support Programme. These programmes are described below.

14.3.4.1 Poverty Reduction Strategy

Guinea has participated in the Poverty Reduction Strategy Paper (PRSP) programme of the International Monetary Fund (IMF) and the World Bank for a number of years. Guinea's second PRSP (PRSP-2), originally covering the period of 2007-2010 but since extended for application through mid-2012, describes macroeconomic, structural, and social policies and programs to promote growth and reduce poverty and associated external financing needs. The PRSP programme also serves as a framework for implementing the United Nations Millennium Development Goals (MDGs). PRSP-2 was prepared by the Republic of Guinea through a broad participatory process with civil society and development partners.

The PRSP programme is based on the principle that institutional capacity is critical to:

• improve governance and institutional and human capacity-building;
• expedite growth and expand employment and income opportunities for all; and
• improve access to high quality social services.
PRSP-2 proposes a number of actions to address and improve institutional capacity:

- strengthening local governments’ managerial capacity by supplying competent personnel as well as required infrastructure and facilities;
- implementing training programmes for local government personnel to improve their performance capabilities;
- promoting community practices (e.g., parents’ associations, health centre management committees, water points, schools, rural paths);
- establishing credit institutions in urban communes (Commune urbaine – CU);
- strengthening the involvement of civil society organisations (CSO) in local government;
- enhancing the participation of young people and women in local government activities;
- improving management of community infrastructure;
- promoting decentralised participatory development;
- promoting growth of private sector and employment; and
- improving access to education.

The Simandou Project is committed to operating in line with PRSP-2 and to contributing to poverty reduction through its day to day operations and its community and economic development programmes.

14.3.4.2 Village Support Programme

To accelerate improvements at a local level, the Republic of Guinea has developed a national programme for rural development with the support of the World Bank. The Village Support Programme (Programme d’appui aux communautés villageoises – PACV) was initiated in 1999 and is supported by the Ministry of Decentralisation, with international funding contributions from lenders such as the World Bank, the International Fund for Agricultural Development (IFAD), the Global Environmental Fund (GEF), and the French Development Agency (Agence française de développement, AFD). The current phase of the programme runs from 2007 to 2013. It is focussed on the rural population who lack basic access to education, health care, clean water and other essential social and economic infrastructure. The PACV programme works to strengthen the capacity of the local administration to manage rural development, with an ultimate goal of providing local communities with the knowledge and skills they need to manage their own development. It aims to:

- find new ways to engage local communities as direct participants in local development;
- produce a framework for a new network of decentralised, self-governing village level institutions, with the long term aim of engaging this network in broader district / national level development planning and implementation; and
- provide local communities with the knowledge and skills they need to manage their own development.

The PACV is organised through the Rural Development Communes (Communes rurales de développement - CRD). Approximately one third of communes in Guinea are currently participating in the programme. Each is required to work collaboratively with the local population to produce a local development plan (Plan de développement local - PDL) as the main tool to guide local socio-economic development including education, agriculture, small and medium enterprise (SME) development, health, water and sanitation. Annual investment plans (Plans d’investissement annuel – PAI) are derived from PDLs and are used by donors and government to target contributions. Each commune receives a grant of US$50 000 per year to cover the PAI and support is provided in monitoring investments.

The Project will work with the PACV programme to align its community development contributions with the identified needs of communities affected by the Project. To date, the Project has agreed to contribute US$1 million to the development of the PDLs in communes in Beyla and Forécariah prefectures (Sections 9 and 1 of the railway line).
14.4 National Economy

14.4.1 Context

In 2011 Guinea ranked 178th out of 187 countries on the Human Development Index (HDI) (1), thereby categorising it as a country with 'low human development'. This rating is comparable to the neighbouring countries of Sierra Leone (180th), Liberia (182nd), Côte d'Ivoire (170th), Mali (175th), Guinea Bissau (176th) and Senegal (155th).

Guinea has a population of approximately 10 million people and covers a surface area of 24 857 km². The country has important mineral reserves; almost half of the world's known reserves of bauxite and significant iron ore, gold, and diamond reserves are found in Guinea. However, only a small proportion of these are currently being exploited.

More than half of the population (and over 80% in rural areas) lives below the poverty line. Levels of education are low, especially in rural areas which have the highest concentration of illiteracy (2). It is estimated that 81% of women are illiterate. Literacy levels have risen from 29% in 2003 to 39% in 2009 (3). Access to health services in the country is also limited.

The capacity of sanitation and water infrastructure is generally insufficient to meet the needs of the population – only 19% have access to adequate sanitation facilities and 7% have access to drinking water (4). Transportation connections across the country are limited to national roads and secondary roads that are often compromised by weather. There is limited access to individual or private sector credit. Guinea was affected by political instability in 2008-2010 as well by armed conflicts in Liberia (1989-2003), Sierra Leone (1991-2002) and Côte d'Ivoire (2001-2011).

14.4.2 Economic Performance

14.4.2.1 GDP and GDP Growth Rate

Guinea's gross domestic product (GDP) in 2010 was approximately US$4.5 billion (GNF 33.6 trillion) in 2010 (5), equating to a per capita GDP of US$452 (GNF 3.4 million) (6) (7).

The main contributors to GDP are industry, accounting for approximately 54% (with an increasing contribution by the mining sector) and services, at approximately 30%. The remainder is agriculture and manufacturing, as summarised in Figure 14.2.
The average annual growth rate over the previous 5 years was 2.8%, falling to less than 1% over the 2009-2010 period, largely due to the impact of the international economic crisis on Guinea's mineral exports. However, in a context of improving political stability allowing for economic, fiscal and monetary reforms, increased investor confidence and foreign investments, the economic growth rate was forecasted to increase to 4% in 2011, potentially reaching 5% in 2012.

14.4.2.2 The Mining Sector

Guinea is the world's largest exporter of bauxite and is also a significant producer of gold and diamonds. Iron ore deposits are yet undeveloped however, a number of iron ore mining projects are currently under development (including Simandou), that are expected to lead to significant growth in the mining sector. While mining contributes only 15% to GDP, the sector is responsible for providing 25% of Guinea's fiscal revenue and generates 90% of exports.

Lack of diversification in the mining sector to date has left the country exposed to volatility in the international price of bauxite, leading to significant variations in government revenue. In recent years, the government has promoted diversification within the mining sector and encouraged the valorisation of mine output in-country, such as through the production of refined alumina.

14.4.3 Inflation and the Exchange Rate

Guinea has suffered from very high inflation in recent years, with annual rates as measured by the consumer price index, ranging from 4.7% to 34.7% between 2006 and 2010. The IMF estimates suggest the annual inflation rate for 2011 is likely to have been about 19.6%.

Inflation has occurred partly as a result of the depreciation of the Guinean Franc exchange rate, driving up the cost of imported food and fuel which together account for roughly 40% of non-mining imports. Monetary expansion policy in the second half of 2009 meant that the market exchange rate depreciated excessively, losing more than 35% of its value against the US dollar over 2009–2010. This had an immediate effect on basic commodities such as rice and cooking oil, most of which are imported. For instance, food prices rose by almost 10% between December 2010 and mid-2011.

(1) IMF Country Report, August 2011
Since the adoption of the Poverty Reduction Strategy Paper (PRSP-2), controlling inflation is now a government priority. Although there is a risk of political unrest and inflationary pressures from the increased demand for minerals, the IMF predicts average inflation to trend downwards.

### 14.4.4 Government Revenue and Expenditure

In 2010, government revenue (including grants) was 16% of GDP, rising to 20% in 2011. International donor grants were limited over 2008-2010 due to political instability, but contributed up to 25% of government revenue in 2011 (see Figure 14.3).

#### Figure 14.3 Government Revenue as % of GDP

![Graph showing government revenue as % of GDP from 2008 to 2011](image)

Under the new Government’s fiscal policy, the Guinean State aims to increase its share of mining revenue to 33% from 15% in 2011. Guinea is currently in the process of becoming a signatory to the Extractive Industries Transparency Initiative (EITI). Once this is finalised, all mining companies in Guinea will be required to submit to higher standards of fiscal transparency according to the requirements of the EITI. Rio Tinto is already a corporate member of the EITI and complies with its provisions.

Guinea’s foreign debt is currently just over US$3 billion, or nearly 70% of GDP. Debt servicing is currently 23% of public expenditure and places a significant burden on the economy.

---

(1) Poverty Reduction Strategy Papers (PRSPs) are prepared by member countries in broad consultation with stakeholders and development partners, including the staffs of the World Bank and the IMF. Updated every three years with annual progress reports, they describe the country’s macroeconomic, structural, and social policies in support of growth and poverty reduction, as well as associated external financing needs and major sources of financing.

(2) Economist Intelligence Unit, Guinea Country Report 2011

(3) This section, including all data and figures included, is taken primarily from the International Monetary Fund Guinea Annual Report 2011 except where otherwise noted.

(4) Economist Intelligence Unit Guinea Country Report 2011

(5) The Extractive Industries Transparency Initiative (EITI) supports improved governance in resource-rich countries through the verification and full publication of company payments and government revenues from oil, gas, and mining.
According to the IMF, “the new government has moved quickly and decisively to stabilise the economy. Policies aim to achieve a major fiscal adjustment by restoring fiscal control and reining in excessive spending. This will permit a sharp reduction in bank financing and monetary growth to support a reduction in inflation and stabilisation of the exchange rate”\(^1\).

14.4.5 Balance of Payments, Exports and Imports

In 2010 exports of goods amounted to US$1 279 million, while imports totalled US$1 305 million, creating a deficit of US$174 million.

As shown in Figure 14.4, mining sales constitute the majority of Guinea’s exports. Mining sales consist mainly of bauxite, which accounted for 34% of total revenue from goods exported in 2010 \(^2\). Guinea’s main customers are India, Russia, the United States, Germany, France, Spain and Ireland.

**Figure 14.4 Exports 2008 – 2010**

![Exports 2008 – 2010](image)

Source: International Monetary Fund Guinea Country Report 2011

Imports in 2010 were from a wider variety of sectors, approximately half of which were composed of intermediate and capital goods, followed by food products and other consumer items and petroleum products.

14.5 Administrative Divisions, Governance and Leadership

14.5.1 Territorial Structure

The current territorial structure of Guinea was established in 1986 and confirmed through amendments to the Constitution in 2011. According to this structure, Guinea is divided into seven administrative regions (Boké, Faranah, Kankan, Kindia, Labé, Mamou and N’Zérékoré) which are furthermore subdivided in 33 prefectures. The city of Conakry ranks as a special zone and is therefore also considered to be an administrative region, as well as a prefecture. Prefectures are divided into sub-prefectures, which are subsequently distinguished as either rural or urban areas as shown in Figure 14.5.

\(^1\) International Monetary Fund Guinea Annual Report 2011
\(^2\) Available at http://www.africaneconomicoutlook.org/en/countries/west-africa/guinea/
As described in Section 14.2, the rail route will extend across the country passing through nine prefectures from the east to the southwest (including the prefectures of Beyla, Kérouané, Kankan, Kouroussa, Kissidougou, Faranah, Mamou, Kindia and Forécariah). The local and regional study areas are further described further in Section 14.2.

14.5.2 Local Government and Administrative Authorities

The decentralisation policies instituted by the Republic of Guinea in the early 1990s aimed to increase the capacity of local government structures, through improving administrative efficiency, governance, decision-making and financial accountability of local authorities. The functions of administrative authorities relevant to regional and local study area are provided in Table 14.3.

Table 14.3 Representatives of Local Government and Administrative Authorities in the Study Area

<table>
<thead>
<tr>
<th>Administrative Division</th>
<th>Authority</th>
<th>Function</th>
</tr>
</thead>
</table>
| Region                  | Governor – Appointed by Government | • Disseminate national guidelines and policies.  
• Transmit suggestions and demands from the prefectures to the centre.  
• Execute the region’s recurrent budget and the investment (crédits délégués) placed under its control by law.  
• Monitor, coordinate and control regional administrative directorates, including health, education, housing, urban planning, community support, Non-Governmental Organisation (NGO) coordination.  
• Promote information, cooperation, and communication for a harmonised and sustained development process. |
| Prefecture              | Prefect – Appointed by Government | • Disseminate, execute and monitor national guidelines and policies.  
• Implement laws and regulations, and maintain security.  
• Execute public expenditures within the prefecture.  
• Monitor, coordinate and control all prefectural administrative directorates and their agents.  
• Oversee and support the work of the sub-prefectures.  
• Prepare the Prefectural Development Plan (PDP) and promote socio-economic and cultural development within the prefecture. The Prefecture Development Committee, presided by the Prefect, is responsible for the PDP. |
<table>
<thead>
<tr>
<th>Administrative Division</th>
<th>Authority</th>
<th>Function</th>
</tr>
</thead>
</table>
| Sub-Prefecture          | Sub-Prefect – Appointed by Government | - Implement laws, regulations and decisions from higher levels of government.  
- Maintain public order and security. This function is shared with the councils of the districts within the sub-prefecture.  
- Collect all local taxes and fees (in conjunction with District Councils).  
- Monitor, coordinate and control administrative directorates of the sub-prefecture.  
- Provide support to and oversee the work of CR (Communes Urbaines – urban communes) and CU (Communes Rurales – rural communes), in particular with respect to providing professional statements regarding all CR/CU decisions in order to facilitate the oversight role of the prefecture. |
| Urban / Rural Commune   | Mayor (Urban commune) – elected by population | - Approximately 350 Urban and Rural Communes have been created to promote local service delivery and local development within the districts that they represent. Services include general administration, infrastructure and transport, urban management, hygiene and sanitation, social services, economic services, and local development and urban planning.  
- The Mayor of the Commune supervises the preparation of LDP and reviews it prior to providing it to the relevant Prefect. |
|                         | President (Rural Commune) – elected by population | - Work with sub-prefectures for public safety and security.  
- Dispute resolution and management.  
- Collect local taxes and fees. |
| District (urban) / Quarter (rural) | President - elected by population | - A channel by which traditional leaders communicate with local government.  
- Local census.  
- Collect local taxes and fees. |
| Sector / Village        | Sector Chief (Doutgui / Doti) – elected by population | - Collect all local taxes and fees. |

### 14.5.3 Traditional Governance and Local Leadership

#### 14.5.3.1 Overview

At a local level, traditional governance is upheld by a number of traditional authorities including the Council of Elders (Conseil des sages), religious authorities and Land Chiefs (chefs de terre). These traditional authorities also interact with government authorities, notably District / Quarter Presidents and Sector Chiefs.

#### 14.5.3.2 Council of Elders

A Council of Elders is elected for each rural and urban district and is legally recognised. Individuals are elected for an indefinite term with the oldest member of the 'generation of the fathers' traditionally acting as the head (see Section 14.5.3.5). The Council of Elders plays an important role at a district level. As custodians of local tradition, they preside over festivals and religious ceremonies, often in conjunction with religious leaders (see below). They also help to preserve and disseminate traditions to young people. The Council of Elders are recognised as having a particularly important role in resolving intra- and inter-family conflicts, including land ownership and management. At the sector level, they nominate candidates for the position of Sector Chief and support his representation to the local authorities.

#### 14.5.3.3 Religious Authorities

Religious authorities at the local level include the Imam and the Mosque Council. They are respected spiritual leaders within communities and are often consulted by the local administration prior to any key decisions being made within the area over which they preside.
14.5.3.4  District / Quartier Presidents and Sector Chiefs

The District / Quartier Presidents and Sector Chiefs represent the government at a local level. They are usually elected by the local population based on proposals made by local leaders, most notably the Council of Elders. In some cases, they may be nominated by local government for political / security reasons. The District / Quartier Presidents and Sector Chiefs often work with the local Land Chief and therefore offer a channel through which traditional leaders can communicate with local government.

14.5.3.5  Founding Families

Each village has a founding lineage (1) i.e. the descendants from the family who first established the settlement. The traditional founding lineage authority is held by the patriarch of this family (2) and traditionally, important decisions cannot be taken at the village level without his blessing. The local administration will therefore often consult the patriarch and his family before taking decisions that will potentially affect the village.

The patriarch often acts as the Land Chief. The Land Chief is responsible for managing the use of land through various rules aimed at preserving land fertility, as well as those that relate to land allocation, fallow areas and periods, prohibited areas etc. He is also in charge of resolving land conflicts in consultation with the Council of Elders. The rights and responsibilities of the Land Chief are passed from generation to generation within the founding family. Brothers and half-brothers of this family are known as the ‘generation of the fathers’. If the lineage of a founding family no longer persists, the oldest surviving male member of the ‘generation of the fathers’ typically becomes the new founding lineage Patriarch and Land Chief. This individual is often an elderly man and therefore his sons and younger brothers may assist him in undertaking his tasks.

The migration and subsequent settlement of families in new locales has led to villages being characterised by interconnected networks of families and lineages (3).

14.5.3.6  Heads of Households

In Guinea, the basic social unit is the family. Decision-making for the family is typically undertaken by the family patriarch.

In 2007, there were approximately 17% of female-headed households in Guinea (4). These female heads were generally widows who lack close male relatives that have the capability to undertake this leadership role.

14.5.4  Institutional Capacity

The process of decentralisation and strengthening of local governance and administrative structures is recognised as an important component of sustainable socio-economic development. In recognition of this, local administrations have been allocated additional responsibilities. However, owing to insufficient education and training, many local administrations have lacked the organisational capacity to deliver public services. Local administrations also have limited budgets (as a result of a small tax base) and a lack of capacity for financial management and accountability, leading to limited service delivery at the local level in most cases.

(1) A lineage is traditionally comprised of the people who are descended from the same patriarch, including blood relations, cousins on the father’s side and their children.
(2) The patriarch is the male head of the family, who is often a member of the oldest generation. Whilst this means that the patriarch can be the oldest man of the family, extended family networks in a polygamous context commonly result in the role being held by a younger male of the older generation.
(3) In this context, a clan refers to a group of close-knit and inter-related families who observe the same rules.
(4) As quoted in the Simandou Project Social and Environmental Baseline Study; Volume B; Social Component; Mine Component; August 2010
14.6 Demographics and Social Organisation

14.6.1 Population

At the national level, Guinea’s population was approximately 10.2 million in 2008 and was growing at an estimated 3.1% per year. Approximately 28% of the population lived in urban areas in that same year and the remaining 72% lived in rural areas (1). Population growth in urban areas is projected to outpace growth in rural areas; the United Nations Population Fund estimates rural population growth at 1.9% and urban population growth at 4.3% from 2012 to 2015 (2).

At the national level, average population density was 41.42 inhabitants per square kilometre (hbt/km²), according to the Institut National de la Statistique de Guinée (INS).

14.6.1.1 Population Distribution in the Study Area

Population distribution in the study area is marked by the general trend of concentration of people in places where there are potentially profitable activities such as farming, grazing, fishing, trade or industry. This distribution is skewed between rural zones and urban centres (see Figure 14.6). Rural populations are typically settled around productive land, grazing areas, water and forested areas (harvested for, among other resources, fuel wood). Throughout the rural areas of the study area, villages are dispersed between large tracts of land that are either uninhabited or very sparsely populated.

Figure 14.6 shows the estimated population density across the rail route. The majority of the route runs through areas of low density (less than 30 hbt/km²).

Among the 22 sub-prefectures crossed by the rail alignment, the four largest are Kindia Centre (119 810 persons), Mamou (62 891 persons), Faranah Centre (62 560 persons) and Moussaya (42 460 persons). Population distribution, however, varies significantly across the rail route.

The three main prefectures in the Project study area which include communities of specific interest to the assessment are Beyla (Section 9), Faranah (Sections 6 through 4), and Forécariah (Section 1). Beyla was estimated to have a population of approximately 213 000 in 2009. Its population density (15.6 hbt/km²) was less than 40% of the national average. Faranah was estimated to have a population of approximately 183 000 in 2009, with a population density of 14.1 hbt/km², 35% of the national average and Forécariah was estimated to have a population of approximately 372 000. Population density in Forécariah was more than double the national average.

Population details of these prefectures are summarised in Table 14.4.

Table 14.4 Population Distribution

<table>
<thead>
<tr>
<th>Section</th>
<th>Prefecture</th>
<th>Population (hbt)</th>
<th>Density (hbt/km²)</th>
<th>Population Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Beyla</td>
<td>212 702</td>
<td>15.6</td>
<td>High concentration in the population centres of Beyla, Moribadou and Nionsomoridou.</td>
</tr>
<tr>
<td>6 – 4</td>
<td>Faranah</td>
<td>183 191</td>
<td>14.1</td>
<td>High concentration in the population centre of Marélla (many small hamlets fairly close together), Sanouya, Faranah-Centre, Tiro, and the village of Dantilia at the confluence of three rivers.</td>
</tr>
<tr>
<td>1</td>
<td>Forécariah</td>
<td>371 706</td>
<td>84.8</td>
<td>High concentration of population in the towns of Maférinty, Forécariah, Farmoréah and Moussaya, as well as on the Islands of Kakossa and Kabak.</td>
</tr>
</tbody>
</table>

Source: Institut National de la Statistique - RGPH 1996 (Projection 2009)

(1) Available at http://www.stat-guinee.org/
(2) Available at http://unstats.un.org/unsd/pocketbook/PDF/Guinea.pdf
Figure 14.6
Densité de population le long du chemin de fer / Population Density Along the Rail Corridor

---

Légende:
- **Défini par la voie ferrée** / Indicative Rail Alignment
- **Tunnel ferroviaire** / Rail Tunnel

**Densité de population (hbt/km²) / Population Density (hbt/km²)**:
- <10
- 10-30
- 30-90
- 90+

---

**Agglomération / Settlement**
- Chef-lieu de préfecture / Prefecture Chief Town
- Chef-lieu de sous-préfecture / Sub-Prefecture Chief Town

**Limites**: Limite de la sous-préfecture / Sub-Prefecture Boundary
Limite de la préfecture / Prefecture Boundary
Frontière entre états / National boundary

---

**Projection**: WGS 1984 UTM Zone 29N

---

**Client**: RioTinto

**Date**: 21/06/2012

**Verifié par**: SD
**Approuvé par**: KR
**Échelle**: Comme barre d'échelle
### 14.6.2 Age and Gender Distribution

Figure 14.7 below illustrates Guinea’s population by age groups and gender.

![Figure 14.7 Guinean Population by Age Groups and Gender, 2009](source)

Guinea has a young population: the median age is 18.3 years \(^{(1)}\). 45% of the rural population (and slightly fewer for the urban population) is aged below fifteen years. In 1996, the Guinean government estimated that average life expectancy is 54 years \(^{(2)}\).

At the national level, the dependency ratio \(^{(3)}\) is very high; the total dependency ratio in 2010 was 86 out of 100, and the dependency ratio for children (i.e., under 15 years of age) was 80 \(^{(4)}\). This places a significant burden on the working age population.

In 2005, the national male / female ratio was 0.92, that is, there were 92 men for every 100 women. In rural areas, the ratio of men to women is slightly lower, at 0.89.

### 14.6.3 Ethnicity, Language, Religion and Traditional Practices

There are more than thirty ethnic groups in Guinea however, three account for 95% of the country’s population, namely, Peul / Fulani (45%), Malinké (30%) and Soussou (20%). Table 14.5 identifies the distribution of these ethnicities within Guinea’s four natural regions.

Due to the high degree of ethnic intermixing, the cultural practices of these groups have been diluted. In addition, whilst traditionally each group has had its own distinctive language, overtime they have assimilated. Although French is the official administrative language, Soussou (predominant in Guinée Maritime), Fulani

---


\(^{(2)}\) Available at http://www.stat-guinee.org/

\(^{(3)}\) The dependency ratio is calculated by dividing the number of people under age 15 and above age 64 by the number of people between the ages of 15 and 64, then multiplying by 100. For instance, a dependency ratio of 90 means there are nine dependents for every ten working-age people.

\(^{(4)}\) Available at http://data.worldbank.org
(used in Moyenne Guinée, specifically the Fouta Djalon and the Mamou area) and Malinké (predominant in Haute Guinée and Guinée Forestière) are the three main national languages.

Table 14.5 Spatial Distribution of Ethnic Groups across the Study Area

<table>
<thead>
<tr>
<th>Natural Region</th>
<th>Prefectures [1]</th>
<th>Dominant Ethnic Group</th>
<th>Other Ethnic Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guinée forestière</td>
<td>Beyla, Kérourané</td>
<td>No dominant group</td>
<td>Guerzés, Kiss, Tomas, Malinkés, Koniankés, Konons, Manons</td>
</tr>
<tr>
<td>Haute Guinée</td>
<td>Kankan, Kouroussa, Kissidougou, Faranah</td>
<td>Malinké</td>
<td>Diallonkés, Kourankos, Koniankés, Ouassoulonkés, Fulani</td>
</tr>
<tr>
<td>Moyenne Guinée</td>
<td>Faranah, Mamou, Kindia</td>
<td>Fulani</td>
<td>Diallonkés, Diakankés, Coniaguis, Bassaris, Soussous, Malinkés</td>
</tr>
<tr>
<td>Basse Guinée (Guinée Maritime)</td>
<td>Kindia, Forécariah</td>
<td>Soussou</td>
<td>Bagas, Landoumas, Temnes, Nalous, Mikhiforés, Dialankés, Fulani, Malinkés</td>
</tr>
</tbody>
</table>

Note: [1] Natural Regions in Guinea are distinguished by distinct geographic and social characteristics and do not directly align with the country’s administrative divisions. However, to clarify the linkages between the natural regions and the rail corridor, prefectures have been assigned to the regions where they are predominately situated.

Guinée Forestière (Sections 8 and 9 of the railway line) is an area of high ethnic diversity with no single ethnic group dominating. However, in Haute Guinée (Sections 4, 5 and 6), the Malinkés constitute the dominant ethnic group even though the region is home to five other ethnicities. Moyenne Guinée (Sections 2, 4, 5 and 6) is mainly occupied by the Fulani. Although traditionally clustered in the mountainous lands of Fouta Djalon, transhumance pastoralism has led the Fulani population to settle a wider area. Lastly, Soussous are the dominant ethnic group of Basse Guinée (Guinée Maritime) (Sections 1 and 2 of the railway line).

Muslims account for 85% of the Guinean population and consequently Islam is the predominant religion in the four natural regions of the country. Islam is particularly deep rooted in Fulani culture and is thus especially observable in the cities of Moyenne Guinée (Sections 2, 4, 5 and 6 of the railway line). The majority of villages have at least one mosque, or else have access to a mosque in a neighbouring village. In many cases these are modest single-room structures that can accommodate approximately 20 to 30 people. Larger and more elaborate mosques have been constructed in larger communities.

Christians represent 10% of the Guinean population. Christians are mainly located in Conakry, in the south and in Guinée Forestière (Sections 8 and 9 of the railway line). The majority of Christians found in subprefectures along the rail route are migrants from other African countries.

Followers of Animism comprise the remaining 5% of the population. Such individuals are most commonly found in Guinée Forestière (Sections 8 and 9 of the railway line). The religion encompasses the beliefs that there is no separation between the spiritual and physical (or material) world, and as such souls or spirits exist not only in humans, but also in all other animals, plants, rocks and other natural features such as mountains or rivers. As a result, many of the villages along the railway line have sacred places linked to nearby natural areas. The sites are typically located in the forests surrounding the villages, along the banks of rivers or at the foot of large trees. Altars are often formed with a pile of stones or a rock used for sacrifices and prayer. For more information of cultural heritage and practices, see Chapter 12: Cultural Heritage.

14.6.4 Village Structure and Social Organisation

Settlement patterns along the rail route are characterised by scattered traditional rural villages typically comprising small agglomerations of family concessions surrounded by forest land and scattered plantations. Each concession is a grouping of traditional huts with thatch roofs, however, rectangular houses with tin roofs are also becoming increasingly popular. Concessions also include small kitchen vegetable gardens, generally limited to a few square metres.
A traditional village is usually subdivided into different areas, each generally recognised as “belonging” to, and occupied by, the members of a single lineage. A traditional family concession takes the physical form of a group of circular huts with an open courtyard in the centre, providing the centre of household life. Huts serve different purposes for the men and women of the household. In cases of polygamy, each wife has a hut where she and her children will sleep and eat. Other huts are used for cooking, storing etc. Illustrations of typical villages are shown in Figure 14.8.

Figure 14.8 Typical Villages

While the members of a community generally live together in their founding village, many villages also have established separate hamlets or encampments associated with outlying agricultural lands and / or grazing lands. These are most commonly agricultural hamlets that are used temporarily during the dry season. Other hamlets are established by herders near grazing lands for their animals or as hunting camps.

The physical form of the traditional rural village and the development within the village reflects, in many respects, aspects of the social organisation of communities. In other instances however, a lineage may extend into different spaces, or subdivisions, within the village.

Dwellings differ from one region to another depending on the population’s predominant ethnic origin. From Kérouané (Section 8 of the railway line) to Mamou (Section 4), houses are essentially round huts with thatch roofing, sometimes “modernised” as round houses with a corrugated iron roof and the addition of rectangular houses in brick or cement blocks with corrugated iron roofing.

In the Faranah area (Sections 4 – 6 of the railway line) villages are generally small – rarely over 150 inhabitants – corresponding to two or three extended families. Houses are round huts with verandas, organised around a central yard, intermingled with small kitchen gardens. Villages are delineated by sacred forests (bois sacrés) used for traditional (animist) ceremonies.

In Soussou villages in Guinée Maritime (Sections 1 and 2 of the railway line), round huts have generally been replaced by rectangular houses with a veranda and corrugated iron roof. Houses are surrounded by small kitchen gardens. Villages are surrounded by grain fields and rice paddies. Houses and kitchen gardens are generally fenced to keep away vagrant cattle.

14.6.5 Household Structure

In most cases, the household is comprised of an extended family or clan. Throughout Guinea, both nuclear and extended households exist. In addition to the wives and children of the household head, the household will often include the head’s brothers, as well as their wives and children.

Rural villages have household sizes of 6-10 people, with larger families typical in the more isolated areas. Among households surveyed along the rail corridor for the Simandou Project, 50% of households had 6 to
10 members, 23% had 1 to 5 members, and 4% had 16 members or more. Household size is generally much smaller among recent in-migrants.

Although polygamy is prohibited by the Guinean Civil Code (Article 315) (1) it is estimated that approximately half of Guinean women are in polygamous unions (2). The head of each household is the patriarch, who has responsibility for and authority over its other members.

In 2005, the United Nations estimated that 46% of girls in Guinea between the age of 15 and 19 were married, divorced or widowed (3). The practice of polygamy often leads to forced marriages, common in most ethnic and religious groups. In addition, the practice of ‘sororate marriage’ persists (marriage between a widower and the sister of his deceased wife) (4).

14.6.6 Mutual Aid Networks and Associations

In each village, there are a number of civil society organisations which provide support to those in poverty. Alongside traditional leadership figures and representatives of local government, they identify and manage the common interests / issues of the communities.

Traditionally, mutual aid groups are organised by social groupings (eg men, women and young people) and economic groupings (eg agricultural cooperatives). Special collections are undertaken when individuals or households require specific assistance. Other mutual aid groups are based on lineages and bring people together to organise and pay for family ceremonies. The nature of mutual aid networks and associations varies between the villages dependent upon the type of issues that each village faces, as well as the availability of relevant skills.

There are often different mutual aid groups for elderly and younger men. Organisation’s aimed at young men bring people together to accomplish common tasks. Together, they cultivate fields and perform tasks for the benefit of the community, for instance road maintenance, building schools and mosques, cleaning village tracks, amongst others.

Organisations also exist which are targeted specifically for women. Some are intended to provide mutual assistance, for instance to help individuals and families in difficulties, whilst others serve to organise women for paid and unpaid agricultural labour. Typically women’s associations support activities such as the cleaning of water sources, the management of wells and boreholes, the maintenance of schools and the development of health related programmes.

Increasingly, men’s and women’s groups are working together and consequently mixed-gender groups are being established.

Youth Associations (Associations des Jeunes) actively participate in development activities such as construction and maintenance of roads, sporting facilities, mosques and schools. However, findings from surveys undertaken near the proposed mine site at the eastern end of the rail corridor suggests that the number of people joining mutual aid organisations, in particular amongst young people, has declined (5). It appears that young people are more interested in wage employment opportunities, in particular work on the Simandou Project and, as a result, are abandoning more traditional forms of mutual aid and support.

In addition to associations and committees, non-governmental organisations (NGOs) also provide assistance to people. Most of these are based in the urban areas in Guinea, however, some also operate in rural areas.

(3) Ibid.
14.6.7 Vulnerable Groups

The socio-economic assessment considers vulnerability to be related to an individual or group’s resilience, that is, their capacity to cope with changes while maintaining their livelihood and social wellbeing. Resilience is often related to the extent to which people can access suitable resources such as assets, social networks, or other means by which they can derive livelihoods upon which they depend.

The assessment recognises that the majority of people within Guinea would be considered vulnerable on a global scale due low levels of human development indicators related to standards of living, health, and education. Vulnerable people in this context are thus defined as those more likely to possess multiple vulnerabilities. In the local and regional study area, the broad categories of people who are considered to be vulnerable include:

- women;
- the elderly;
- marginal / minority ethnic groups;
- refugees;
- disabled or chronically ill persons;
- villages with limited or no access to roads;
- people without access to land or land-based livelihoods; and
- youth.

These categories are further considered in the sub-sections below.

14.6.7.1 Women

In traditional Guinean society, a number of practices tend to determine the social status of women as lower than that of men:

- traditionally, women do not inherit or own land. Women are entitled to hold land only on an usufruct (1) basis, which authorises them to work family-owned land and draw a wage;

- women often play a limited role in decision-making at community and national levels. Although sometimes participating in village councils and other traditional forums, women’s position and power in village affairs and decision-making is still generally limited;

- women generally have low levels of social development when measured in terms of literacy, educational attainment or general health conditions;

- at a national level, 14% of women are literate (as compared to 45% of men);

- the incidence of maternal mortality is very high in Guinea, which was ranked 178th out of 187 countries in 2008 with a maternal mortality ratio of 680 deaths of women per 100 000 live births (2);

- women in rural areas, including much of the local and regional study area, primarily work as unpaid agricultural labour while men control cash-cropping and agricultural income. Women primarily use their produce for household consumption. Formal credit is generally not accessible to women because the loans terms favour the household head who is predominantly male; and

- in Guinea 17% of rural households are headed by women. Nearly 55% of rural households led by women (compared to 45% of rural households by men) live below the poverty line.

(1) Usufruct is a right of enjoyment enabling a holder to derive profit or benefit from property that either is titled to another person or which is held in common ownership.

(2) UNDP (2011). International Human Development Indicators – Guinea.
14.6.7.2 The Elderly

The elderly are generally recognised as being vulnerable. They are often dependent on the younger generations for assistance in meeting their basic needs (e.g., housing, water, food). They typically prefer their lifestyles to remain unchanged and are less likely to readily adapt to change. Not being part of the active workforce, the elderly are usually not in a position to take advantage of the benefits typically associated with large projects such as the Simandou Project.

14.6.7.3 Disabled and Chronically Ill Persons

The disabled are usually considered as vulnerable individuals within society and are less likely to be able to access the Project benefits. People living with HIV/AIDS and Tuberculosis (TB) can be considered to be disabled as their ability to remain healthy and maintain their livelihoods is often compromised by their illness. Facilities to diagnose and treat people living with HIV/AIDS and TB are generally inadequate across Guinea.

14.6.7.4 Marginal and Minority Ethnic groups

Throughout the four natural regions, the ethnic composition differs. In Guinée Forestière (Sections 8 and 9 of the railway line), there is no one dominant ethnic group and this is an area of high ethnic diversity. However, in Haute Guinée (Sections 4, 5 and 6), the Malinkés constitute the dominant ethnic group even though the region is home to five other ethnicities. Moyenne Guinée (Sections 2, 4, 5 and 6) is mainly occupied by the Fulani. Lastly, Soussous are the dominant ethnic group of Basse Guinée (Guinée Maritime) (Sections 1 and 2 of the railway line). It was reported that there is a high degree of ethnic mixing and that there is no known discrimination against any particular ethnic group. There may, however, be a risk that in areas that are dominated by single ethnic groups, there may be some form of subtle discrimination against the smaller ethnic groups.

14.6.7.5 Refugees

Historically there has been an influx of refugees into Guinea, specifically those who were displaced during civil disturbances in Liberia and Sierra Leone between 1990 and 1995. Forécariah Prefecture (Section 1) saw a sharp population increase as a result of refugees and return migrants in the early to mid-1990s. Since 1995, about 24,000 refugees settled along the coast in Forécariah. There are also concentrations of refugees in the Kindia sub-prefecture. There was a dramatic reduction in the number of refugees, between 2004 and 2007 due to assisted repatriation of approximately 50,000 refugees to their countries of origin, mostly from the prefectures of Kissidougou and N'Zérékoré. There are still a relatively small number of refugees (approximately 5,000) mostly of Ivorian and Liberian origin, residing near Kouankan. Although many of the refugees have integrated into local village communities, it is possible that they may still be regarded as outsiders by some. No specific examples of discrimination were identified but there may be a risk that the refugees could be marginalised from decision-making and access to opportunities.

14.6.7.6 Villages with Limited or No Access to Roads

Many communities have limited or no road access, and where there are roads, they are often difficult or impossible to use during the rainy season. As such, access to markets, health care facilities and other social infrastructure and services and the opportunities offered by the Project, will be constrained.

14.6.7.7 People without Access to Land

Given the heavy reliance on land and land-based livelihoods, people without access to land are vulnerable and are likely to find it difficult to support themselves and their families. In rural areas there are few alternatives available to people to sustain themselves.

14.6.7.8 Youth

Youth can be recognised as vulnerable, though in a way distinct from other categories listed above. Being at their physical prime but often facing an unknown future, youth may be seen as both empowered and
disempowered. Youth are vulnerable in the sense that they are between dependence (childhood) and independence (adulthood) but, without access to resources and support to enable their transition to adulthood, they may face a large degree of instability in their lives. Another characteristic of youth is that it is a time when individuals are developing their identities and questioning societal norms; when youth perceive that their economic and social prospects are poor, they may engage in antisocial behaviour. For the purposes of this assessment, youth are quantitatively defined as persons approximately aged 15 to 24 or, recognising variations by cultural context, qualitatively defined by their degree of independence with respect to their obtaining of a livelihood, relationship status and living arrangements (1).

14.7 Land Management and Tenure

14.7.1 Customary Land Tenure

In Guinea, as in the rest of Africa, land is administered through both statutory and customary systems of land tenure and usage rights. A summary of land tenure and management is provided below.

In most of rural Guinea, the right to occupy and cultivate land is administered through a customary land tenure system. Summarised simply, founding families are considered as “custodians” of all village land on behalf of the community; this responsibility (also termed droit éminent) is passed from generation to generation within the founding lineage. They are responsible for allocating land to community members, and ensuring the respect for local practices for the preservation of land fertility including fallow and exclusion areas. The founding lineage allocates land to others to use for residential and agricultural purposes as follows:

- the founding family invites two or three other lineages to settle. The newcomers are allocated lands to clear and exploit for habitation and agriculture;
- the newly arrived families initially are granted conditional rights (droit précaire) to the land. Over time the nature of land ownership shifts to one of unconditional rights (droits consolidés) with the new lineage gaining full control of the land; and
- subsequently established lineages may invite other lineages to settle and allocate some of their lands to them. As a result, in some communities, there can be several “generations” of lineages that hold consolidated rights to their lands and constitute the principal lineages.

Access to land for new arrivals can be considered as a temporary right (droit précaire), granted by the founding lineage, that may become confirmed over time. Land can also be loaned out with the permission of the chief and elders. There may often be restrictions on the use of such land (for example, perennial plantations such as fruit trees may not be authorised).

14.7.2 Formal Land Tenure in the Local and Regional Study Area

Customary rather than formal procedures typically govern land tenure in the local and regional study area. Studies undertaken for the Simandou Mine indicated that approximately three quarters of households in the mine local study area did not have any documents to support their land use rights and a similar pattern is expected to apply over most of the rail route. They also indicated that properties generally change hands due to inheritance or family agreements or through gifts and allocations from village chiefs or heads of founding families. Loans and purchases were the least common methods or property transfer.

(1) Proposed mitigation measures targeting youth will be directed towards the 15 to 24 age group, but ages may be adjusted upwards or downwards as determined appropriate for the Guinean context through on-going stakeholder feedback, and as required by applicable Guinean laws. See World Bank. ‘Children & Youth’. Available at http://go.worldbank.org/2ESS9SO270 - last accessed 11 May 2011.
14.7.3 Land Management Institutions and Conflict Management

14.7.3.1 Land Management Institutions

The main institutions in charge of land tenure management at the level of the prefecture and the CR are as follows.

- **Prefecture Land Tenure Commission:** A Land Tenure Commission is established in each prefecture under the Land and Domain Code (CFD). It is responsible for determining whether investment requirements have been satisfied by applicants for land titles.

- **Prefecture Department of Urban Planning and Housing:** The Department of Urban Planning and Housing assumes responsibility for carrying out the mandate of the Ministry of Urban Planning and Housing within each prefecture. Under 2008 Decree D/2008/040/PRG/SGG, this includes establishing the framework for physical development within the territory of the prefecture inclusive of the CR and CU (1), preparing strategic and local development plans (*Plans ou Schémas Directeurs, Plans Locaux d’Urbanisme*) and Urban Development Master Plans (*Schéma Directeur d’Aménagement et d’Urbanisme – SDAU*). The latter defines the principal orientations for physical development of urban areas (types and locations of land uses, transportation infrastructure, public and community services and future development areas).

The CFD stipulates that the various CRs are responsible for the management of community land and assets. The Rural Land Policy advocates the establishment of local Land Commissions at the CR level. At CR level, the commune council is in charge of preparing a Local Development Plan (*Plans de développement local, PDL*) that establishes a programme of development and maintenance of infrastructure and public services within the CR territory. The *Programme d’Appui aux Communautés Villageoises* (PACV) described in Section 14.3.4 aims to support the councils in developing these PDLs (2).

14.7.3.2 Conflict Management

Land is a common source of conflict within and between communities as described below.

- **Intra-community conflicts:** They are generally minor in nature and occur between individuals of the same social group. The most common source of conflict is due to crop loss caused by unrestrained livestock, however, tension is also caused when individuals occupy more than their share of allocated land.

- **Inter-community conflicts:** The basis of these conflicts may be similar in nature to those that occur within a community however, they are often compounded by the lack of allegiance felt by the parties to the social group. These conflicts sometimes require the intervention of local administrations or other authorities.

The village Council of Elders is the institution responsible for traditional conflict resolution. Mediation is used primarily in the case of inter-community conflicts. In general conflicts are settled through the intervention of the Local Councils, without reference to administrative authorities or the courts.

In terms of modern conflict resolution, the sub-prefecture is the administrative body typically responsible for hearing and resolving conflicts for people living in rural villages. If a matter cannot be resolved by the sub-prefecture it may be referred to the Prefectural Peace Court which is mandated to judge land litigation matters.

---

(1) According to Article 185 of the 2008 Decree: “Established at communal and community levels, across the Department of Urban Planning and Housing, in collaboration with other concerned departments and agencies, the general framework of spatial development.

(2) La Granada Enterprises Ltd. (LGE) (2008b) *Étude de Base socio-économique, État de référence. Mission du 18/02/08 au 17/05/08, Rapport 2/3.* Conakry: Simfer S.A.
14.8 Livelihoods and Economic Activities

14.8.1 Agriculture

In the local and regional study area, the majority of households are involved in agriculture. In large villages there are more diverse livelihood activities such as salaried employment, service-based and small-scale transformation businesses e.g. rice hulling, coffee crushing and soap production. However, these are small-scale and provide limited surplus income. Growth in this predominant agricultural economy is largely constrained by environmental and socio-economic factors, including:

- limited availability and quality of agricultural land, water, forest products, hunting and fishing resources;
- limited access to modern agricultural techniques and equipment;
- limited access to markets due to poor transportation infrastructure;
- limited access to processing techniques for local valorisation of agricultural output; and
- limited access to credit.

Rice, as the staple food, is the primary crop grown by most households; the average consumption per capita is 100 to 110 kg per year. Other crops include cassava, potatoes, groundnuts and corn. Crops grown specifically by women include groundnuts, manioc, beans and other vegetables. Faranah, Kankan and Forécariah prefectures (Sections 7, 6, 5, 4 and 1 of the railway line) have the highest rice yield and these exceed the average for Guinea; Forécariah prefecture (Section 1) is known as the “rice barn” of Guinea, providing much of the food supply for Conakry. Yam and cassava have the highest crop yields, however these are less valuable crops.

14.8.1.1 Subsistence vs Income-Generating Agricultural Activities

In rural areas throughout Guinea agricultural activities include both subsistence and income-generating activities. Subsistence involves mainly cultivation of rice and root vegetables, supported by livestock rearing, fishing, and hunting in some households. Income-generating agricultural activities may include trades and services related to agricultural production, as well as the production of cash crops in some areas. The most prevalent cash crop is palm oil, although fruit trees, coffee, and cola are also grown. Further information regarding cash crops in the regional study area is provided in Section 14.8.1.2.

14.8.1.2 Agricultural Land Types

There are four distinct types of agricultural land: lowlands, plains, uplands and plantations. These are outlined below.

The lowlands (bas fonds) illustrated in Figure 14.9, include valley bottoms and flood plains and benefit from abundant natural irrigation all year round and fertile soils. They do not require fallow periods. They are used for rice cultivation and market gardening in the rainy season and in the dry season become excellent grazing land. These are considered to be the most valuable agricultural land and are generally protected under the customary law. Giving or selling lowland plots to foreigners is generally prohibited. Cultivation of the lowlands is presently based on traditional methods although there is potential for the use of enhanced agricultural technologies.
Agricultural plains are extended areas, slightly uneven with low elevations and located on both sides of major rivers. Unlike lowlands, plains are not regularly flooded. Soils are of good quality but unsuitable for flooded rice cultivation. On the plains, crops include rice and other grains (fonio, millet, corn), cassava, ground nuts, and other crops with crop cycles ranging from three to six months depending on the variety of rice used.

Uplands or hillside land (coteaux) illustrated in Figure 14.10 are the most widespread agricultural land areas. Hill plots are more extensive than the lowlands. Most hill plots are cultivated with upland rice, other cereals (millet, fonio, sorghum) and groundnuts. From time to time, during the rainy season or if there is a water source nearby, there will be market gardening. The land is normally left fallow frequently for quite long periods, up to about 10 years. Consequently, the income generated by hill plots is generally lower than that from lowlands and plains. Fallow periods are decreasing due to population pressure.

Plantations and Palm Groves are cultivated in both the lowland and upland areas. Palm and citrus trees predominate in the Soussou and Mamou areas. More complex systems can be found in Haute Guinée (Sections 6, 5 and 4 of the railway line), and Guinée Forestière (Sections 2 and 1) with banana trees, cashew trees, coffee bushes, and cacao trees.
Large private commercial plantations are found in the Moussayah, Farmoriah and Kallia sub-prefectures of Forécariah, including oil palm, various fruit trees, citrus, bananas, coffee and cola. There are small fruit tree plantations in most villages (cashew nut, mango, orange, banana, and avocado).

Kindia Prefecture (Section 2 of the railway line) used to be part of the Forécariah-Mamou-Dubréka ‘banana triangle’ with Kindia at its centre. The disputes that resulted from these colonial plantations still persist (eg in Allassoyah Sub-Prefecture) and are characterised by confused ownership with a mix of modern property law, traditional law and illegality.

14.8.1.3 Agricultural Calendar

Agricultural activities vary with agro-ecological conditions. Farming calendars differ slightly across Guinea but an approximate timetable for lowland and hillside farming is set out in Table 14.6.

Table 14.6 Agricultural Calendar

<table>
<thead>
<tr>
<th>Practice</th>
<th>J</th>
<th>F</th>
<th>M</th>
<th>A</th>
<th>M</th>
<th>J</th>
<th>J</th>
<th>A</th>
<th>S</th>
<th>O</th>
<th>N</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillside</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clearing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plowing, seeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surveillance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harvest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil preparation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transplanting rice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harvest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.8.1.4 Key Challenges

The main challenges faced by farmers throughout the study area include:

- community-based or smallholder land rights limiting opportunities for larger-scale agricultural developments;
- lack of capital, inputs and protection against hazards (eg drought, animals, insects);
- lack of support for agricultural extension, and for enhanced development of lowlands and plains;
- lack of modern agricultural equipment, limiting the potential to work on plains and large areas;
- lack of access to improved seeds, hence relatively low yield from traditional seeds;
- declining interest in agricultural activities as young people seek wage employment leading to decreased agricultural production and food shortages; and
- use of traditional techniques, mainly involving slash and burn, and associated repeated out-of-control bush fires that destroy forests and crops, and deplete the soil.
14.8.2 Animal Husbandry and Pastoralism

Animal husbandry is a significant activity throughout the local study area. The land is well suited to grazing and pastoralism. It engages about 70% of the rural population. The main farmed species are cattle, sheep and goats. According to the 1995 Census by the National Directorate of Livestock (DNE), Moyenne Guinée in particular had a total of 57,000 heads of cattle (40% of the national cattle herd).

There are seven defined eco-pastoral zones in Guinea. The rail alignment transects four of these zones, as outlined below.

- **The Forest Zone** extends to the south-east, south of Kissidougou-Beyla. Vegetation consists of grassland and some forest. Pastoralism is limited in this zone.

- **The Transition Zone** is a narrow strip between the forest and savanna between Faranah-Komodou in the north and Kissidougou-Beyla in the south. The area offers significant potential fodder although the grass is high (often up to 3 m) which limits its use for grazing as livestock cannot penetrate the area. As such pastoralism is limited.

- **The Fouta South Zone** forms a triangular area between the prefectures of Télémélé, Kindia and Mamou. This corresponds with a large farming area. Typically the transhumant activities depart from the farmed area at the end of the wet season; annual rainfall exceeds 1,500 mm from early May to early November. The cool season is from December to January. Once leaving the farmed area, herds pass through the transition zone towards the forest which is rich in grazing and water.

- **The Maritime Zone** is located in the southwest where the rail will reach the port. The annual rainfall exceeds 2,000 mm and falls over half of the year. This is an area of grassland where there are still some areas of dense semi-deciduous forest. The landscape is marked by oil palm and coconut. The region provides good foraging and transhumance is the dominant livestock activity.

Along the rail alignment, there are two types of livestock farming - sedentary and nomadic farming. The sedentary farming system is almost always extensive. In all villages, farmers raise domestic livestock - small ruminants, especially sheep and goats. Small animals remain in the vicinity of huts and near villages. Cattle graze in pasture areas that vary according to season. Animals are tethered to protect crops during winter rainy seasons and roam freely in the dry season.

Nomadic animal husbandry (pastoralism) occurs along the entire route of the railway. Large herd migrations can take place over distances of more than 100 km. This practice is called transhumant livestock farming. Transhumant herds are numerous but the practice is especially prevalent in the sub-prefectures of Kérouané, Sandénea, Marella, Soyah, Souguêta, and Sikhourou (Sections 8 to 4 of the railway). Sikhourou is a major breeding area and has the largest number of herds with up to 1,000 heads per herd.

Annually, the prefectural authorities decide when the herds will leave (usually 15 February) and when they will return (usually 15 May) to their home prefectures. There is some coordination between the various prefectures to manage the movement of livestock. The Pastoral Code defines the general rules governing livestock management (i.e. managing exploitation of grazing areas, preservation of pastoral land use rights, and resolution of conflicts); the Code, however, is rarely applied.

Areas utilised by nomadic pastoralists are specific and sensitive to disruption. Water and grazing resources are in short supply and regularly cause conflict between transhumant pastoralist and residential farmers. As elsewhere in Africa, neither fields nor pastoralist herds are fenced off from each other. A significant and rapid change in local demographics, brought about by in-migration to specific areas, may further disrupt delicate arrangements between settled communities and pastoralists.

Pastoralism is a male dominated activity; women are involved with the supporting functions of wood collection, milking and selling of produce. Pastoralism is a key traditional activity associated with many groups, in particular, the Fulani (the dominant ethnic group in Moyenne Guinée), some of whom have up to 2,000 heads of cattle per herd. Pastoral activities generate income through the sale of livestock, wages for...
caring for the herds, sale of produce (eg milk, meat), and use of bulls for farm work. Sales are most often to intermediaries at stock markets or the buyers go to the villages to collect animals. The decision to sell animals is generally made when the family requires subsistence or for ceremonial occasions. People do not sell livestock as a means of on-going business or income; the animals are valuable in themselves.

14.8.2.1 Herder and Farmer Conflicts

Conflicts often occur between herders and farmers as a result of cattle roaming into agricultural fields. Traditionally, farmer-herder conflicts are referred to the village Council of Elders for resolution. Conflict resolution committees have been established at the district level, moving the process towards adjudication by officials who have been elected to head local government (CU and CR) or appointed to district, sub-prefectural and prefectural administrations.

14.8.3 Fishing

The rail route crosses many small rivers and streams and several major ones in which local people fish. Inland fishing is an important subsistence activity for villagers in the study area and also takes place in the rice fields during the wet season. However, it is marginal in terms of income-generation and fish are rarely traded.

Fish are consumed fresh or smoked. Fishing is normally undertaken with either tapered threads or hooks. Alternatively, fishermen and women use nets in the small ponds that are created by the flow of river-water from dams.

Fishing is conducted by both men and women yet, in the dry season, it is dominated by women; they account for 80% of those engaged in the processing of fish. Fishing activities peak in the dry season (November to March) following the agricultural harvest at which time farmers have more time to pursue alternate activities.

14.8.4 Salt Production

Salt production is a lucrative activity for households at the coastal end of the rail route and it is practiced by some households in the district of Maférinya (Section 1 of the railway).

In January-February salt hangars are cleaned and built and men begin to cut firewood (mango and mangrove wood). By the end of March and throughout April, entire households are involved in regularly forming piles of “dust” (a mixture of salt and ground) by scraping the saline. The “dust” is then passed into a large strainer made of straw and wood. It takes three tons of wood to yield a ton of salt. The bags of salt (fökhe) are sold between October and December. The sale of salt can yield up to 150 000 to 250 000 GNF per 60-100 kg bag (1).

14.8.5 Artisanal Mining

The area crossed by the railway, like much of Guinea, is rich in mineral resources. There is artisanal mining of diamonds and gold throughout the regional study area. There are many prospectors reported in Banankoro, Kounsankoro and Soromaya sub-prefectures in Kérouané Prefecture (Section 8). Artisanal gold mining is practiced in Marella Sub-Prefecture in Faranah Prefecture (Sections 4 and 5) and Douako Sub-Prefecture in Kouroussa Prefecture (Section 6). Artisanal and commercial gold mining occurs in Albadariah and Manfran sub-prefectures in Kissidougou Prefecture (Section 6). Small-scale craft-related diamond mining can also be found in Moussaya and Sichourou sub-prefectures in Forécariah Prefecture (Section 1).

Much of the artisanal mining is managed by in-migrants coming from neighbouring regions of Guinea and from Mali, Côte d’Ivoire and Sierra Leone, with labour supplied by local communities. It occurs mostly as a seasonal activity that allows people primarily engaged in agriculture to earn income during the dry season.

(1) 150 000 to 250 000 GNF / bag = US$22 - 36/ bag.
The working and living conditions of artisanal miners are poor, and daily wages are often low. The local economic benefit of these mining activities is often minimal as profit is not reinvested into the region.

14.8.6 Timber and Non-Timber Forest Products

Natural resources, including forest products, form an integral part of people’s livelihoods particularly in July and August when food stocks are low and households must find other strategies for subsistence and trade purposes. Hunting, gathering and fishing are common strategies involving the exploitation of non-timber forest products (NTFP). Natural resources used in local villages include wood for fuel, building materials, edible and medicinal wild plants, insects and small game. The degree of reliance on these products varies from village to village, depending on factors such as distance to markets, roads and transportation services, poverty levels, etc.

Traditionally, there is a forested area at the periphery of most villages and for many communities, forest products form an integral part of people’s livelihoods. However, residents noted that these resources are becoming increasingly scarce as a result of population growth and years of exploitation. This has placed a significant strain on those who rely on timber and NTFPs for subsistence and income-generating activities.

14.8.6.1 Hunting

Hunting is practised as a traditional activity in rural areas across Guinea. Bush meat is generally a prized source of protein. However, in the more urban areas, meat consumed is largely poultry, goat, or beef.

14.8.6.2 Wild Plants

Edible plant species are harvested by local communities. These include wild fruits, nuts, seeds, leaves, mushrooms and other products from the forests. These constitute an important source of plant products that are primarily used for subsistence and also traded to provide low levels of income. In West Africa ninety four species of wild plant have been recorded to be used as food. Different parts of plants are exploited and consumed in various forms: leaves may be eaten fresh, dried, cooked, or fermented; fruits are eaten fresh or used to produce juice, jam, jelly, and wine; seeds and fruit kernels are used as sources of oil and fat or as spices; and other plant parts such as tubers, young shoots and buds are also consumed as food.

14.8.6.3 Medicinal Plants

Collection of medicinal plants is a common practice among local communities. Given the low income of the local populations and the high cost of drugs on sale in the markets, traditional medicine remains an important custom in the Project area. In addition, there is an important cultural aspect related to the use of traditional medicine by the local guérisseurs (healers) and they are highly respected in particular in the smaller more traditional villages.

14.8.6.4 Wood

Fuel wood and charcoal are the two main sources of energy for rural communities as they do not have access to other energy sources. Wood also often represents a source of supplemental income. Wood is used to meet household energy needs, for cooking and transformation of produce such as palm oil. Charcoal production is becoming more common and is a lucrative activity due to population growth and the resultant increase in demand.

14.8.6.5 Sacred Sites

Forests hold sacred value to the villages as they are thought to offer protection and safeguarding of springs and graves. This is because they are thought to be the abode of deities or spirits that are either worshipped or feared by the locals. These and other sacred sites are of particular importance to the youth as they are used as ceremonial grounds for the initiation rites of young men and women. Initiation sites used by women are said to be kept secret to preserve their integrity. While the sites for women may be used for rites related
to female circumcision, they are also likely to represent women-only spaces for the conduct of other rites of passage to womanhood and for spiritual activities.

In the Guinean bush, some isolated scattered trees are considered sacred. Also, forests are thought to be the home of ancestors, gods and spirits. Sacred spaces were previously highly protected owing to their social and cultural roles, but are coming under increasing threat and undergoing decline.

14.8.7 Trade and Local Business

A range of small businesses support the basic needs of the local communities, including small-scale production activities of palm oil, groundnut paste and charcoal, retail (e.g., grocery supply, clothing and agricultural supplies) and services (e.g., restaurants, hairdressers, transportation and mobile phone services). Traditionally, men hold specialised trade skills as carpenters, mechanics, electricians, plumbers, stone masons, sculptors, rice hullers, and blacksmiths. Women’s activities traditionally include market trading of agricultural produce, basket and soap making, pottery and embroidery.

There are markets in all sub-prefectures but access can be restricted due to poor roads hampering the sale of local products and imported goods.

14.8.8 Employment and Unemployment

Guinea’s labour force was estimated to be 4.7 million in 2009, predominantly active in the agricultural sector (76%) (1). Informal employment and subsistence livelihoods predominate in agriculture and fishing. There are no publicly available national statistics for unemployment in Guinea, and the line between the formal and informal sectors is blurred. However, it is known that formal unemployment affects younger people most: a reported 17% of high school graduates, 15% of those who have completed vocational training, and nearly 12% of university graduates or post-graduates are unemployed (2).

According to the IMF Poverty Reduction Strategy Paper of 2008, as a result of poverty and predominance of informal employment, many people perform several jobs in order to overcome poverty but are still not able to gain income above the poverty line (2). Subsistence farming is also often associated with other informal cash-generating activities.

14.8.9 Waged Employment

Waged employment is more common in urban areas where there is more industry, retail, services and government. There is little to no formal waged employment in rural villages due to the lack of employers. Waged agricultural labour is also uncommon as the majority of families tend to their own lands.

Very few women work in the formal waged sector in Guinea, where nearly 90% of workers are men (3). In the public and private sectors alike, Guinean women are most often found in low and middle-ranking positions. Of Guinea’s 51 000 civil servants in 2005, approximately 22% were women.

Livelihoods that have traditionally been based on subsistence agriculture are beginning to shift towards wage employment. This has been evident in the area surrounding the mine but where local people have been employed for the early exploration phase activities. The anticipation of extensive waged employment opportunities linked to the Project has resulted in raised expectations amongst the local population for employment (4).

---

(1) International Labour Organization, Key Indicators of the Labour Market database. Available at http://www.indexmundi.com/facts/guinea/employment-in-agriculture
(2) International Monetary Fund Guinea: Poverty Reduction Strategy Paper of 2008
(4) The expectation and need for employment opportunities was raised throughout the study area during the Stakeholder Engagement meetings.
14.8.10 Employment Skills

In rural areas, existing skills are primarily linked to subsistence activities, namely agriculture, pastoralism and fishing. In addition, a small portion of the population provide support to subsistence activities (e.g., maintenance and repair of farming equipment, transport, net and boat making), operate small businesses (e.g., restaurants, bars, general dealers, salons), and work on the construction of local houses and small-scale buildings and infrastructure. Other land use activities and associated special skills are also present, including artisanal mining.

Employment and business skills related to rail construction and operations are very limited at present. In order for local residents to successfully compete for employment (beyond unskilled labour) and business opportunities, local capacities in these areas will need to be developed.

14.9 Poverty and Distribution of Wealth

14.9.1 Prevalence of Poverty in Guinea

Nearly half of the Guinean population (49%) lives below the poverty line of US$196 per person per year (US$0.53 per day)\(^{(1)}\)\(^{(2)}\). Of these, 19% live in extreme poverty, with an income below US$116 per person per year. According to the PRSP-2, the number of Guineans living in poverty has increased significantly since 2003. This was exacerbated by the slower economic growth and high levels of inflation over this period.

14.9.2 Distribution of Poverty and Wealth

The distribution of wealth in Guinea is extremely distorted with a Gini coefficient of 0.403\(^{(3)}\). As shown in Figure 14.11 households in the 1st quintile (i.e., the poorest 20% of the population) only have a 6.4% share of Guinea’s total consumption. At the other extreme, households in the 5th quintile (i.e., the richest 20% of the population) account for 47.2% of total consumption and those in the 4th quintile (i.e., the second richest 20% of the population) account for 21% of the country’s consumption.

![Gini Coefficient – Distribution of Consumption in Guinea](image)

Source: Adapted from International Monetary Fund Guinea: Poverty Reduction Strategy Paper of 2008

---

\((1)\) This section, including all data and figures included, is taken directly from the International Monetary Fund Guinea: Poverty Reduction Strategy Paper of 2008 (PRSP2).


\((3)\) The Gini Coefficient is an indicator that measures income inequality. The coefficient varies between 0, which reflects complete equality and 1, which indicates complete inequality (one person has all the income or consumption, all others have none). (World Bank)
Poverty is unequally distributed between the urban and rural areas of the country. It is most prevalent in rural areas; 60% of Guineans living in rural areas are poor and account for 86% of overall poverty within the country \(^{(1)}\).

Figure 14.12 from the PRSP-2, shows the incidence of poverty (as averages over the population of each prefecture) by administrative region of Guinea. Although both rural and urban people are living in poverty, there is a significant difference in income and affordability between the areas. Labé Region has the highest incidence of poverty at 61.1% to 66.3%, with Kankan, Faranah and N’Zérékoré (the administrative region in which the mine will be located) falling into the next band at 43.4% - 61.1%. These regions are poorer than Kindia and Boké, which are closer to the capital and have a higher concentration of economic infrastructure, basic social services and qualified human resources \(^{(1)}\).

Figure 14.13 shows the incidence of poverty at the prefecture level. This shows that none of the Prefectures in the study area registers the highest poverty levels of between 63.4% and 72%. Beyla and Faranah fall into the next band (moderate poverty) at between 43.4% and 61.1%.

\(\text{Figure 14.12 Incidence of Poverty by Administrative Region, 2002 / 2003}\)

Source: International Monetary Fund Guinea: Poverty Reduction Strategy Paper of 2008. As noted in the PRSP, the map was developed by the Guinea Ministry of Planning and the World Bank, using data combined from the 1996 population census and Basic Integrated Poverty Assessment Survey (EIBEP) findings from 2002 / 2003.

14.9.3 Dimensions of Poverty

Causes of poverty are multiple and complex but its effects are readily perceived; income poverty is a key aspect. The inflation rate in Guinea ranged from 4.7% to 34.7% between 2006 and 2010 resulting in significant loss of purchasing power amongst households across the country.

In rural areas, most people rely on subsistence agriculture to produce food and other products needed to meet household consumption needs. Limited productivity and climatic vulnerability mean that food security is a critical issue. The PRSP-2 reports that food security has been deteriorating.

Other important dimensions of poverty are reflected in the socio-demographic characteristics of the area. They include the lack of hygiene and the poor health status of the population, high rates of illiteracy, rudimentary housing and the lack of modern tools of production. Isolation in remote locations can be exacerbated by the lack of road infrastructure and hinders access to information which can in turn limit the potential for integration and development planning.

14.9.4 Poverty and Gender

In developing countries such as Guinea, an important dimension of gender inequality is the amount of time women work in a day or a week compared to men. In a study on time poverty (1) in Guinea, the results showed that in rural areas women worked an average of 55 hours per week compared to 44 hours for

---

(1) ‘Time poverty’ is defined “as working long hours and having no choice to do otherwise. An individual is time poor if he / she is working long hours and is also monetary poor.”
men (1). Women living in rural areas are more ‘time poor’ (56%) than women living in urban area (36%). For men, it is the reverse, with urban men more likely to be ‘time poor’ than rural men (37% vs. 35%).

Rural women and men spend approximately the same time working in fields or family business (21.0 hours per week for women and 23.9 hours per week for men). Men will spend more time than women working for a wage (13.1 hours versus 8.6 hours for women), while women spend a larger portion of their time carrying out various domestic chores such as fetching water (18.3 hours per week compared with 2.6 hours for men). As an example, in Beyla, at the eastern end of the railway (Section 9), water points are distant for many users and obtaining water is a long process with waiting times of up to 2 hours.

14.9.5 Savings, Investment and Microfinance

In general, there is neither a culture of saving nor investment in the study area or in Guinea as a whole. There are a number of reasons for this, including limited cash in the economy, very high inflation, lack of disposable income and limited banking facilities.

Although people do not use formal investment and savings mechanisms, tontines are widely used for saving. Tontines are an investment tool into which subscribers make payments and dividends are received on the investment. The investors are usually groups of people with common interests (eg women, farmers, fishermen), forming a mechanism by which issues are managed collectively. The income earned serves to buy goods for the benefit of the group or is redistributed amongst the members. In addition, special collections are undertaken when individuals or households require specific assistance.

In areas where banking systems are absent, owning cattle is seen as a measure to ensure that a household can deal with unexpected events or shocks. Due to their high value, cattle can be sold to generate income, if required.

Throughout the regional study area, villages that are located at a faraway distance from the larger and more established towns have limited or no formal banking services. People use tontines, village associations and cattle as a means of saving and investment. At the local level, in larger villages, Credit Rural de Guinée, offers microfinance services in many rural villages.

Since 2006, the Simandou Project has supported microfinance programmes to promote economic development in sub-prefectures near the Simandou Mine. These programmes are outlined in Section 14.12.

14.10 Social Infrastructure and Services

The level and quality of social infrastructure and services varies across the Project area; however, these are generally inadequate to meet the needs of the population. Through baseline surveys, respondents have been found to claim that the high levels of poverty are attributable, at least in part, to the inadequate infrastructure and services, including but not limited to:

- lack of access to potable water for domestic consumption and inadequate sanitation;
- limited number of wells and boreholes;
- isolation resulting from inadequate road infrastructure;
- under-resourced and poor quality education infrastructure; and
- remote and under-equipped health centres and hospitals.

The remainder of this section provides a description of the key infrastructure and services available in the regional study area. These include:

- education;
- health;

• housing;
• water and sanitation;
• domestic waste management;
• road and transportation; and
• power.

14.10.1 Education

For Guinea, the office of Regional Education Inspection coordinates the activities of prefectural education departments. Education is provided free of charge and is compulsory for children aged 6 to 12 years old; however, in spite of this, enrolment and attendance levels remain low. French is the language of instruction at all levels, with the exceptions of Franco-Arab and Koranic schools, which also use Arabic and local languages. Overall, there are high levels of dissatisfaction amongst the population about the schooling system; specifically the standard of the education system and quality of the infrastructure. The other concerns are:

• a lack of schools (particularly secondary schools) in the area;
• a lack of adequately qualified teachers and high student to teacher ratios;
• overcrowded class rooms;
• long distances to schools;
• the majority of secondary school teachers being based in urban areas; and
• a lack of funds to pay for school meals, stationary etc.

14.10.1.1 Donor Programmes

‘The Catalytic Fund’ is a multi-donor trust fund. It was established through The Global Partnership for Education, a coalition of development organisations (including the World Bank) which aims to help low-income countries meet the education element of the Millennium Development Goals\(^1\). The fund has been established as a means of providing transitional financial assistance to countries whose education sector plans have been endorsed by its donors. The Catalytic Fund is comprised of 46 developing countries and more than 30 bilateral, regional, and international agencies, development banks, the private sector, teachers and local and global civil society groups. It is devoted to helping more children enrol in school, as well as ensuring that they receive a better level of education. The strategy for 2011-2014 prioritises increased support for fragile states, learning outcomes and quality education, and girls’ education. Guinea is one of 37 countries that have received a funding allocation and as part of the programme, UNICEF will build 1,000 schools and invest in teacher training and improved curricula in Guinea over the next two years.

In addition, the World Education's Ambassadors' Girls' Scholarship Program (AGSP) provides support to approximately 7,500 girls in Guinea. This program provides assistance to vulnerable female youth who are economically disadvantaged, disabled or HIV-affected or infected. The AGSP provides comprehensive support for girls' education in the form of scholarships, mentoring and parent and community awareness programs to promote and support girls' education for the duration of primary school\(^2\).

---

\(^{1}\) The Millennium Development Goals are eight goals that all 191 UN member states have agreed to try to achieve by the year 2015. The United Nations Millennium Declaration, signed in September 2000 commits world leaders to combat poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women. Available at http://www.undp.org/content/undp/en/home/mdgoverview.html - last accessed 12 January 2012.

14.10.1.2 School Facilities, Enrolment, and Attendance

Around half of the villages along the rail route have at least one public primary school \(^{(1)}\). In addition, some villages also have a Koranic or Franco-Arab school; where available, the majority of students attend a Koranic school rather than a public school.

In general, school enrolment is very low: nationally, less than half (43%) of school-aged children are enrolled in primary schools. Rural areas typically report the lowest levels of enrolment in comparison with urban centres. The reasons for low enrolment may be varied, although it often stems from the distances needed to travel to school, as well as a general lack of awareness about the value of education (ie parents do not see a need to send their children to school). Along the rail route, enrolment is below 50% in the majority of sub-prefectures, although it may approach 80% in larger urban communities such as Forécariah. Dropout rates are also high, and are often associated with a lack of teachers, the need for children to participate in agricultural work, household poverty, and the early marriage of girls.

Gender is also a significant factor in school enrolment, and girls are evidently challenged to participate and stay in school. Nationally, only 48% of the girls complete primary education (amongst those who enrol in school to begin with), compared with 72% of boys \(^{(2)}\). Along the rail route, only a quarter of sub-prefectures show female enrolment higher than 50% of total population of girls, and less than 10% of these girls are reported to complete primary school.

The primary education programme starts at age six, and comprises six grades; this is followed by secondary education, including junior high (grades 7 through 9) and senior high (grades 10 through 13). Most villages have a local primary school, or access to a school in a neighbouring village, whereas secondary schools are typically located in urban areas and large villages (and thus are often quite far from smaller communities).

14.10.1.3 Adult Education Levels

Over half the number of household heads along the rail route have never attended school. Less than 5% have completed secondary education and even fewer have undertaken some form of tertiary education. In households where the head has received some form of education, the majority (70%) have no other household member who has attended school. Literacy levels are, in all areas, extremely low. The UNHDR estimates that Guinea’s adult literacy rate (population aged over 15 years) is 39.5%.

14.10.1.4 Educational Infrastructure and Quality

The lack of school facilities, particularly in rural areas (including much of the local and regional study area) is considered to be one of the principal reasons for low literacy levels and poor school attendance. Children often have to walk long distances to attend schools in neighbouring villages; this problem is exacerbated for those in higher grades as secondary schools are fewer and generally only located in large towns. Another key issue is the insufficient number of teachers to staff schools. This often results in teachers having to teach a wide range of ages and abilities thereby affecting the quality of education each student receives.

14.10.2 Health Infrastructure and Services

Existing health infrastructure and services in the local study area are described in Chapter 20: Community Health, Safety, and Security.

14.10.3 Housing

There are two principal types of housing in the area: traditional or more ‘modern’ (Figure 14.14 and Figure 14.15). Traditional houses are circular mud-brick huts with a conical thatch roof. Nearly two-thirds of

---

\(^{(1)}\) By prefecture, the percentage of villages with at least one public primary school is: 50% in Kérouané, 36% in Kankan, 77% in Kouroussa, 52% in Faranah, 59% in Mamou, 61% in Kindia, and 49% in Forécariah.

\(^{(2)}\) World Bank 2004
Guineans live in this type of house. Some households, most commonly in urban areas, live in more ‘modern’ rectangular houses constructed of masonry or cement bricks, with metal roofs. The type of house structure is an indicator of household living conditions, particularly in the case of households that can afford to build brick / cement structures. The construction of houses with and without finished floors can be viewed as a proxy for housing quality. Houses built with dirt floors tend to increase the propagation of infectious and parasitic diseases. The cost to build depends on the quality of materials; a traditional hut costs the least, then a rectangular masonry or concrete house with a tin roof, but without interior plaster finishes and the most costly is a house with a finished with plaster ceiling.

From Kérouané to Mamou, traditional huts represent the main type of housing. Along the rail route, only 2.5% of households in Kérouané, 7% in Kankan, 3.5% in Kouroussa and 6.8% in Faranah use ‘modern’ methods for house construction. In Mamou prefecture 22% of houses are built using ‘modern’ methods. In Basse Guinée, many of the traditional huts have been replaced by rectangular ones or modern, cement-walled type of housing. Respectively, 51.6% and 64% of the households in Kindia and Forécariah prefectures had a modern type of housing.

14.10.4 Water and Sanitation

In Guinea, the National Water Supply Service (Service National des Points d’Eau - SNAPE) coordinates the provision of water to communities; it has offices in each of the administrative regions. In rural areas, regional agricultural engineering departments are responsible for the provision of water to villages. Villages qualify for a well or borehole if the village has over 300 inhabitants, is accessible by road and can contribute 30%
towards the cost. Individuals who use the facility are required to pay a monthly fee that is used to maintain the infrastructure and the area surrounding it.

Boreholes and wells (both ameliorated ones that have been lined and equipped with hand pumps, and traditional ones without pumps or lining) are used where infrastructure is available (Figure 14.16). Many of the larger and more accessible villages are equipped with boreholes that have been installed through various funding initiatives. In many cases, funds are lacking to maintain the infrastructure.

Water from boreholes is usually better quality than water sourced from wells. Borehole water is usually pumped from a deeper aquifer and is therefore better protected from contamination, however, water drawn from shallow wells is often at risk of pollution from sanitation effluents. Use of wells and boreholes is usually restricted to a few hours a day in order to control use and enable recharge of the source.

Figure 14.16 Village Water Sources (wells / boreholes and rivers)

In addition to its basic domestic purposes, water is essential for almost all local livelihood activities including small scale irrigation, palm oil extraction, artisanal mining, housing construction, fishing, and livestock breeding. Ritual sites (e.g. initiation sites for circumcision) are also dependent on the presence of water of appropriate quality.

Surface water is used primarily for crop irrigation (namely through the use of buckets as opposed to irrigation systems), washing, recreation, consumption and as a drinking source for livestock. Surface water is used only for consumption where groundwater is inadequate, located far away from houses and crops or, is unavailable. Often well water cannot be consumed and is used only for washing. Rain water is the primary water source used to irrigate crops. In the dry seasons surface water is used to supplement the rain water for crop irrigation.

At the national level, 71% of the total population (and 61% of the rural population) have access to improved drinking water infrastructure (such as boreholes or improved wells). Along the railway route, boreholes are the most common water infrastructure. Despite this, there are relatively few boreholes in this area and the majority of local villagers are dependent on surface water sources such as rivers and creeks. Among the villages surveyed during the baseline studies, only 38% access to an operational borehole. This ratio was 60% in Kérouané prefecture (Section 8 of the railway line); 14% in Kankan (Section 7); 44% in Kouroussa (Section 6); 48% in Faranah (Sections 4 – 6); 27% in Mamou (Section 4); 44% in Kindia (Section 2); and 36% in Forécariah (Section 1).

As there is no public sanitation network, villages and towns along the railway route use pit latrines, to which access is variable. Only 41% of the villages surveyed had access to a pit latrine; this ratio was 40% in Kérouané prefecture, 21% in Kankan, 44% in Kouroussa, 38% in Faranah, 23% in Mamou, 28% in Kindia, and 58% in Forécariah.
14.10.5 Domestic Waste Management Infrastructure

According to the Integrated Survey on Poverty Assessment, there is no formal waste management infrastructure in the entire Project area. In Guinea, in 2002, the majority of the population (77.4%) discarded waste in open, unmanaged areas. This nation-wide average is significantly lowered by the fact that Conakry has a waste collection service, albeit with 18% of Conakry’s population still discarding waste in open areas.

In the eastern part of the country this ratio was relatively consistent at 90.8% for Guinée Forestière (Sections 8 and 9 of the railway line), 89.1% for Haute Guinée (Sections 4, 5 and 6), and 90.8% for Moyenne Guinée (Sections 2, 4, 5 and 6). It was lower in Basse Guinée (Sections 1 and 2 of the railway line) at 82.9%.

14.10.6 Road and Transportation Infrastructure

The road network within the entire Project area is limited, making travel between villages difficult. Less than 30% of the road network is paved (1), and unpaved roads pose accessibility problems, especially in the rainy season.

The quality of the roads along the rail route varies from poor to moderate. The majority of roads located within the vicinity of urban centres are generally maintained and therefore in better condition to those in rural villages.

Aside from pedestrian traffic, the most common means of transportation are bicycles and motorbikes. Due to the poor quality of the roads in rural areas, bicycles remain the most common form of transportation; in urban areas motorcycles are becoming more prevalent. This is particularly notable in areas near the Simandou Mine where there has been an increase in waged income as a consequence of the Simandou Project. Very few people own motorised vehicles.

14.10.7 Power

At the national level, 20% of households are connected to the electricity grid. In urban areas (except Conakry) electricity is the main source of lighting for 29% of the households. Throughout the regional study area, except Forécariah (Section 1 of the railway) which is connected to a centralised grid from Conakry (albeit subject to frequent power cuts), there is no power grid and only urban areas have access to electricity. Electricity is primarily generated using diesel generators. The majority of households use alternate fuel sources, such as wood and charcoal, to meet their power needs.

14.11 Risks and Community-Identified Needs Raised in Data Gathering and Consultation

Within the framework of socio-economic primary data collection for the Simandou Project a number of important issues were identified. Local populations are optimistic and have high expectations that the Project will foster development and bring about economic benefits and livelihoods opportunities. However, these very expectations, in combination with a multiplicity of issues, constitute risks and challenges for the Project.

In-migration and the socio-economic issues it raises for host communities is one of the most significant risks associated with the Simandou Project. The influx of people to the communities surrounding the Simandou Mine, attracted by the Project, began as early as 2004, and has continued since that time. The phenomenon is an inevitable consequence of large projects where future prospects, economic benefits and livelihood opportunities attract interest. However, the rapid growth in population in communities surrounding the Simandou Mine which may spread to communities along the rail corridor near Project activities, raises several risks.

During the two rounds of stakeholder engagement conferences, organised in September / October 2011 and in January / February 2012, discussion sessions were held to allow stakeholders to give their opinion or ask

---

questions about the Simandou Project, including the rail component. Feedback forms were also distributed during these conferences, collected and read for analysis and response.

Concerns and questions voiced during the public discussions or via the feedback forms were analysed in order to gain an understanding of the most common and significant issues and risks perceived by stakeholders along the rail corridor. The main issues expressed during this consultation process related to:

- opportunities in terms of employment and training (mainly for the young and for the illiterate);
- the compensation process in case of resettlement;
- concern over the final rail alignment;
- support to local infrastructures, local organisations and to income generating activities;
- impact of the railway on cattle and transhumance routes;
- crossing of the railway;
- noise and dust impacts associated to the construction and operation of the railway;
- protection and restoration of the vegetation cover in the Project area; and
- impacts on fauna and biodiversity.

A more detailed analysis is provided in Annex 4A: Simandou Project Stakeholder Engagement Report. Details are also included, where relevant, in this report’s socio-economic impact assessment chapters.

14.12 Project Economic and Community Development Programmes

14.12.1 Overview

The Simandou Project is without precedent in Guinea in terms of size and potential economic contributions. Having been present in Guinea for almost 10 years, Rio Tinto recognises that the development of the Project has the potential for significant impacts on the national economy and communities’ livelihoods. It also recognises that, despite possessing mineral wealth, some countries have historically experienced a ‘resource curse’ in which extractive projects have paradoxically inhibited economic growth and worsened development levels. Accordingly, the Project has undertaken a number of economic and community development activities since 2006 and has established partnerships with external stakeholders committed to promoting development in Guinea. These programmes and partnerships provide a platform for future community and economic development activities designed to mitigate impacts identified in the following chapters:

- Chapter 15: National Economy;
- Chapter 16: Employment and Economic Development;
- Chapter 17: In-Migration;
- Chapter 18: Land Use and Land-Based Livelihoods;
- Chapter 19: Social Structures and Community Life; and
- Chapter 20: Community Health, Safety and Security.

Brief details of activities to date are provided below.

14.12.2 Partnerships

When designing and implementing socio-economic and community programmes the Project takes into account the integrated involvement of the Republic of Guinea as well as international agencies and organisations dedicated to promoting development in Guinea. The Project’s key international partners to date include:

- **International Financial Institutions**: The Project is working to align its programmes with Guinea’s PRSP-2, a development policy and planning document supported by the International Monetary Fund (IMF) and the World Bank. The Project expects to work further with the World Bank, serving as the centre of a multi-million dollar growth pole project to further the Bank’s objectives to utilise mining as a stimulus for broader growth in Guinea. Alongside the IFC the Project is also implementing a three year
IFC Linkages Programme (funded 30/70% IFC/the Project with an annual investment of US$1.3 million), which provides technical assistance to strengthen local SMEs and assist them to compete for supply contracts;

- **Multilateral Donors:** Donor partnerships have included undertaking youth reproductive health programmes with the UN Population Fund (UNFPA) and infrastructure planning with the European Commission, which presently funds infrastructure refurbishments in the *Guinée Forestiére* (Sections 9 and 8 of the railway line) and *Guinée Maritime* (Sections 2 and 1); and

- **Bilateral Development Agencies:** The Project has worked with AFD, the French development agency, on local capacity building in support of the PACV, and GIZ and USAID (German and US development agencies respectively) on HIV/AIDS and malaria treatment programmes.

The Project has also collaborated with a number of Guinean NGOs and civil society organisations on its economic and community development programmes. These include ADCAP (the Association for Community Development and Agro-Pastoralism) and CADIC (Centre for Support and Development of Community Initiatives), AUDI (Actors United for Integrated Development) for agricultural programmes; PRIDE Finance and CAFODEC for microfinance programmes; and the Chamber of Mines of Guinea for HIV/AIDS treatment and prevention programmes.

The Project will continue to seek partnerships with the Republic of Guinea, international agencies and organisations, and NGOs to design and implement socio-economic and community programmes in the future, as part of its Social Management Framework (see Volume V: Social and Environmental Management Plan).

### 14.12.3 Past and On-going Programmes

Between 2006 and 2009, the Project spent over US$34 million on education, health, agriculture, social and environmental studies, and public infrastructure including a new airfield, roads and bridges, and telecommunications systems. These activities and programmes, which promote both direct and indirect economic benefits in Guinea, are summarised in Table 14.7.

As an example, in 2008 the Simandou Project commenced routine repair and maintenance of the National Highway (N1) from Kankan to N’Zérékoré following discussions between the Project and the Republic of Guinea. The initial scope of work involved the rehabilitation of numerous dangerous sections with an initial cost of US$2.5 million, but the scope was extended to focus on maintenance of an approximately 130 km length of road between Beyla and N’Zérékoré. The earthworks contractors responsible for the delivery of the programme employ local Guineans with approximately 15 full time employees and, to date, have rehabilitated and maintained more than 500 km of road.

<table>
<thead>
<tr>
<th>Investment Area</th>
<th>Description of Programmes</th>
<th>Expenditure (US$m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>Aerodrome construction, public road maintenance and construction, construction of mobile communication systems, construction of school and market, construction of public bridge, rehabilitation of health centres and installation of water wells.</td>
<td>16.4</td>
</tr>
<tr>
<td>Education and Youth Affairs</td>
<td>Adult literacy education programme, donation of school equipment, and financial support to school programmes and events.</td>
<td>0.25</td>
</tr>
<tr>
<td>Health and Hygiene</td>
<td>Distribution of mosquito nets, HIV/AIDS prevention programmes, malaria prevention programme, and donation of sanitation equipment.</td>
<td>0.19</td>
</tr>
<tr>
<td>Agriculture</td>
<td>‘Microcredit’ programmes, support to farmer unions, and construction of cattle enclosures</td>
<td>0.11</td>
</tr>
<tr>
<td>Economic Development</td>
<td>Economic Development Fund (1), rail rehabilitation studies, and economic development studies.</td>
<td>5.5</td>
</tr>
<tr>
<td>Social Studies</td>
<td>Socio-economic baseline studies, development plans, and zoning and migration plans.</td>
<td>1.8</td>
</tr>
</tbody>
</table>
## Table: Socio-Economic and Community Baseline

<table>
<thead>
<tr>
<th>Investment Area</th>
<th>Description of Programmes</th>
<th>Expenditure (US$m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Projects</td>
<td>Reforestation and nursery programme, forest fire prevention programme, baseline studies, and environmental education.</td>
<td>3.76</td>
</tr>
<tr>
<td>Tax Payments</td>
<td>Royalty advances, taxes, and expatriate salary taxes.</td>
<td>6.42</td>
</tr>
<tr>
<td><strong>Total 2006-2009</strong></td>
<td></td>
<td><strong>34.43</strong></td>
</tr>
</tbody>
</table>

Note: [1] Contributed by the IFC which has a 5% stake in the Simandou Project
Source: Rio Tinto Simandou 2009 Sustainable Development Report

From 2009 to 2011 the Project continued to invest in socio-economic and community programmes, these are set out below.

### 14.12.3.1 Employment and Business Development Opportunities

In 2009 the Simandou Project employed over 1 000 people in Guinea (including over 550 full-time employees) with more than 90% of the workforce being Guinean. To further empower individuals and communities to take advantage of the Project's direct, indirect, and induced business and employment opportunities, thereby maximising economic development, the Project has developed a number of business / SME and work readiness programmes including the following.

- **Beyla Enterprise Centre:** The Centre was constructed in 2010 and its function is to create a group of businesses that will be able to meet Project tender requirements for the provision of goods and services. It provides a central location for businesses to access information and training (e.g., access to credit opportunities, developing business plans) and to make use of office and communication equipment. Over twenty two training sessions for SMEs were held in 2011.

- **Local Microfinance and Small Business Programme:** In collaboration with PRIDE Finance and CAFODEC the Project has established a microfinance programme that provides loans to small businesses as well as training in credit management. To date, the programme has disbursed approximately US$232,000 in loans and trained 1,129 beneficiaries. Some local enterprises receiving funds from the programme, including GATEC and UGAN, have since obtained contracts with the Project and its contractors. The programme is expected to be self-sufficient within three years, allowing it to continue to provide financial products and services to communities without requiring the Project's direct support.

### 14.12.3.2 Capacity Building

Support for a capacity building programme for local authorities in 19 villages and Beyla Town nearby the Simandou Mine, at the eastern end of the rail corridor. The programme included training on project and financial management, with the objective of providing communities with the skills to transparently and effectively undertake development projects that meet local needs and priorities. A total of 1,335 people underwent training, and the programme facilitated the construction of 70 water wells, 6 small bridges, 3 cattle parks, a market, a school and an enterprise centre. This feeds into the Project’s on-going support to the PACV programme as described in Section 14.3.4.2.

### 14.12.3.3 Community and Infrastructure Programmes

Between 2010 and 2011, the Project contributed US$10.5 million in socio-economic and community programmes related to a number of development areas, including but not limited to health, business development, education, public infrastructure, and agriculture, as well as the promotion of cultural events. Partners from the national government and international development community contributed an additional US$381,000 in funds and collaborated in the majority of Project programmes (see Section 14.12.4). Many of these programmes continue today and are described in Section 14.12.3 below.

The Project also made a number of non-cash contributions in 2010 and 2011, including the transportation and donation of goods for social services and businesses in the local study area (e.g., building materials,
education materials, equipment for businesses and radio stations, and medication and mattresses for health centres).

14.12.3.4 Health, Safety and Security (HSS) Activities

The Project has undertaken a number of programmes to address HSS issues in the broader Project area, working in collaboration with USAID and GIZ in particular. Two areas of focus have included malaria and HIV/AIDS prevention and treatment programmes.

- Malaria Prevention and Treatment: The Project commenced a comprehensive vector control programme in 2008 to eliminate new incidents of malaria in areas currently controlled by the Project. The programme includes environmental and chemical mitigation, control and reduction of individual risk, limiting the effects of infection, and supporting prompt diagnosis and treatment. The malaria frequency rate in controlled areas reportedly halved as a result of the implementation of the malaria vector control programme between January 2009 and February 2010.

- In 2009, the Project also began working to combat malaria in local communities near the mine, establishing agreements with the National Malaria Control Programme (Programme national de lutte contre le paludisme - PNLP) and USAID. In coordination with the PNLP the Project has trained community agents on malaria prevention and treatment to broaden communities’ access to care. The programme also supported the distribution of about 7 000 DEET impregnated bed nets to pregnant women via local health centres in Beyla Prefecture (Section 9 of the railway line). An additional 10 000 DEET impregnated bed nets have been distributed to local communities via USAID. It is believed that these programmes, together with the Project’s vector control programme, have contributed to reductions in the frequency of malaria among local communities.

- HIV Prevention: The Project has supported a number of activities to promote awareness, and prevent the spread of, HIV/AIDS for both its workforce and local communities. These activities have included training and support for health personnel and health structure management committees in Beyla prefecture (Section 9 of the railway line), organising a HIV/AIDS awareness caravan to travel through communities, distributing condoms, training peer educators in Canga and Conakry, hosting community events for World AIDS Day, and supporting the creation of a youth centre in Beyla to focus on reproductive health. Partners in these activities have included Guinea’s Ministry of Health, UNFPA, GTZ, the Chamber of Mines of Guinea (CMG), Partenaires contre le Sida, and REGAP+.

In 2011 the Project was recognised for its HIV/AIDS and malaria prevention activities with an Award for Business Action on Health (category Community Investment) from GBC Health, a coalition of more than 200 companies and organisations working ’to mobilise the power of the global business community to build a healthier world’.

14.12.3.5 Land Based Livelihood Development

To date, the Project has focused its livelihoods development programmes in the prefectures of Beyla and Macenta (Section 9) near the Simandou Mine, specifically on villages immediately surrounding the Pic de Fon Classified Forest. It is anticipated that other appropriate agriculture, forestry, and fishery programmes will be extended to other areas along the rail corridor. The Project initiated the following Livelihood Development programmes in 2011.

- Agricultural Development: This programme strives to support the communities affected by the enforcement of the Guinean Forest Code, which prohibits a range of income generating activities within the borders of the Pic de Fon Classified Forest. Through a variety of projects the Project is supporting villages immediately bordering the Classified Forest to find agricultural intensification solutions

(1) The villages involved include: Bankoro, Foma, Lamandou, Wataférédu, Moribadou, Banko, Dandano, Koréla, Kissibou, Soumailadou, N’chia, Mando and Moyenne.
through the use of chemical herbicides, mineral fertilisers, animal traction, high yielding seed varieties, and good farming techniques.

- Most notably, the Project has supported a rice production programme since 2010, which began with a pilot in the village of Lamandou but was extended in 2011 to seven other villages. The programme aims to reduce dependency of the rural population to the natural resources in the Pic de Fon, contribute to the improvement of food self-sufficiency, reduce the inflation of food prices, and improve rural households’ revenues through yield improvements. During the programme’s implementation average productivity increased from 1.3 tonne/ha to 4.3 tonne/ha.

- Projects have been identified in consultation with the administrative authorities, local communities and relevant government and partners (government and private). NGO partners include ADCAP (Association for Community Development and Agro-pastoralism), CADIC (Centre for Support and Development of Community Initiatives), and AUDI (Actors United for Integrated Development). The Project is primarily responsible for support, advice, partnership management, and monitoring and evaluation.

- Income Generation: In addition to the agricultural intensification projects above, the Project has supported projects focused on enhancing income generation opportunities. Projects to date have included a focus on the breeding and sale of agouti, a rodent native to West Africa, to reduce uncontrolled hunting and provide alternate sources of protein to local communities. Other projects support the growth and sale of jatropha, a shrub that serves as natural fencing and protects against erosion, and palm oil, to enhance production levels and improve market linkages for local farmers. The Project is currently investigating new opportunities for income generation projects based on local needs and market demand.