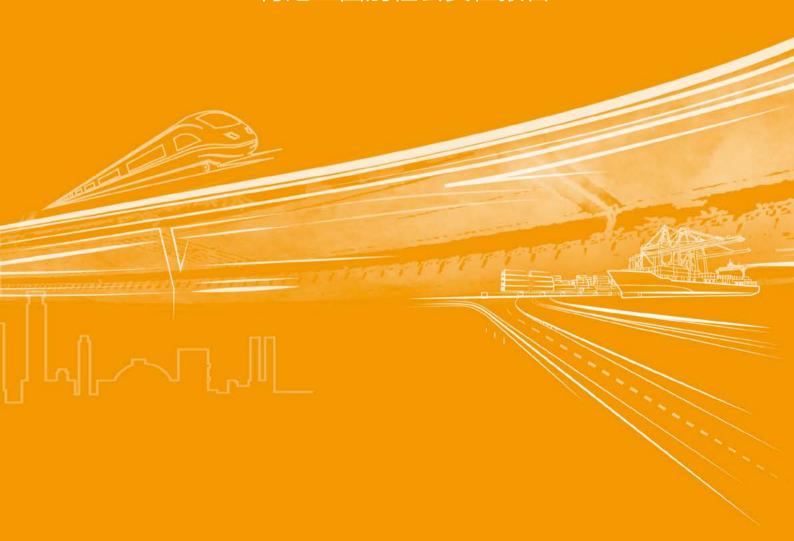




## China Road and Bridge Corporation中国路桥工程有限责任公司

## Social Responsibility Report in Kenya 肯尼亚国别社会责任报告





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Lu Shan, Chairman of CRBC中国路桥工程有限公司董事长 卢山

## **Message from CRBC**

CRBC is a large-scale infrastructure construction and investment company with global presence. Following the corporate spirit of "transportation integrates the world, the builder's field is boundless" and the business philosophy of "building roads & bridges and contributing to society, putting people first and pursuing excellence", CRBC has built a large number of bridges, municipal roads, railways, ports and docks, aiming to "build a more connected world, create a more livable city, live a better life".

Kenya, as one of the first pilot countries for China-Africa capacity cooperation, plays a leading and exemplary role during the cooperation process. Actively responding to national strategies and guided be "building a community of share future", we have actively expanded our business toward new sector such as railways, ports and industrial parks while enhancing the contracting business of traditional road and bridge projects, striving to achieve the connectivity of infrastructure and speed up the construction of high speed railway network, road network and regional aviation network a well as industrialization. We attact importance to the connectivity with the Kenyan people and activel fulfill our social responsibilities, be localized development, environmental practices, donating funds for education, helping the poor, providing dispater rolling as as to applicate

harmonious development between the Company and the local community.

In the future, we shall continue to emphasize morality, justice, equality and win-win co-operation in addition to devoting ourselves to improving the lives of Kenyans as part of being a responsible company and the relationship between China and Kenya.



Du Fei, General Manager of CRBC中国路桥工程有限公司总经理 杜飞

## 中国路桥致辞

中国路桥工程有限责任公司是一家在全球范围内从事大型基础设施建设和投资业务的国际化企业。多年来,公司秉承"交融天下,建者无疆"的企业精神,牢记"筑路架桥,奉献社会;以人为本,追求卓越"的企业宗旨,修建了大批桥梁、市政道路、轨道交通、港口和码头,致力于实现"让世界更畅通,让城市更宜居,让生活更美好"的美好愿景。

肯尼亚是中非产能合作先行试点国家之一,在中非合作中发挥着引领和示范作用。我们积极融入国家战略,以"命运共同体"为指引,在夯实传统的道路、桥梁工程建设承包业务基础上,积极拓宽业务范围,在铁路、港口、工业园等新领域发展,致力于实现基础设施的"硬联通",助力实现非洲国家"三网一化"。我们重视与肯尼亚人民民心的"软联通",积极履行社会责任,通过属地化发展、环保实践、捐资助学、扶危济困、抢险救灾等行动,实现企业与当地社会的和谐发展。

未来,我们将继承发扬重道义、求公平、谋共赢的传统,以负责任的企业形象做好中肯友谊使者,为创造美好生活而努力!

## Message from CRBC in Kenya

Kenya has always been one of our key markets for further expansion. We set up our Kenyan office in December 1984 and it has been dedicated to the construction of infrastructure projects in Kenya, such as roads, bridges, ports and railways. Leveraging our business advantages, we actively align ourselves with Kenyan development strategies and industry plans, so as to develop projects significant to the development of Kenya, complete projects with high quality, and strive to provide products and services that exceed customers' expectations.

Under the premise of guaranteeing the safety, quality and progress of projects, we, as a responsible constructor, endeavor to meet higher construction standards and create projects that exceed expectations of the customers. As a responsible operator, we not only provide railway operation and maintenance services, but also provide Kenya with support for technology transfer and personnel training, and actively elevate the objectives of localization management to help boost independent development of the local.

For more than 30 years, we have made great efforts to promote Kenya's economic and social development and improve the living conditions of the Kenyan people. Our projects have not only improved the local infrastructure, but also improved local employment and boosted economic development. With a focus on resource conservation, circular economy, ecological restoration and environmental protection in our operations, we actively fulfilled our social responsibility, helped local disadvantaged groups, helped solve local social problems, and ultimately promoted the coordinated development of local economy, environmental protection and social progress.

In the future, we will continue to actively implement the United Nations 2030 Agenda for Sustainable Development, integrate into the economic and social development process in Kenya, work with stakeholders to create and share values, and be a good corporate citizen. We will continue to seek opportunities for expanding industry cooperation, nurture the local industry chain, create more jobs for the Kenyan people and cultivate more talents. We will continue to pay attention to the impact that our productions and operations have on the environment and society. Additionally, we will continue to actively engage in community development, improvement of education, water supply, infrastructure and facilitate sustainable projects to improve Kenya's economy and society.

## 中国路桥在肯尼亚致辞

肯尼亚一直以来都是我们高度关注并积极拓展的重点市场。我们于 1984 年 12 月在肯尼亚设立 办事处,致力于肯尼亚的公路、桥梁、港口、铁路等基础设施的建设。我们发挥业务优势,主 动对接肯尼亚发展战略与产业规划,精心培育肯尼亚发展所需的项目,高质量完成项目建设, 努力提供超越客户预期的产品服务。

作为负责任的建设者,我们在保障工程的安全、质量、进度前提下,主动提高建设标准,为客户打造超越期望的工程。作为负责任的运营者,我们不仅提供铁路运营及维护服务,同时为肯尼亚提供技术转移,人员培训等服务,主动提高属地化管理目标,助力当地实现自主发展。

30 余年来,我们为促进肯尼亚经济社会发展、改善肯尼亚人民生活水平做出贡献。项目建设不 仅改善了当地基础设施,还带动了当地就业和经济发展。我们注重运营过程中的资源节约、循 环经济、生态恢复和环境保护,积极开展社会责任实践,帮助当地弱势群体,助力解决社会问题, 促进当地经济增长、环境保护和社会进步的协调发展。

未来,我们将积极落实联合国 2030 年可持续发展议程,将可持续发展融入肯尼亚经济社会发展进程,携手利益相关方共创、共享价值,做优秀企业公民。我们将继续扩大产业合作,培育本土产业链,为肯尼亚创造更多就业机会、培养更多人才。我们将更加注重控制生产运营对环境和社会的影响,积极参与社区建设,在教育、供水、基础设施等方面继续贡献力量,助力肯尼亚经济社会持续繁荣发展。



## **CRBC** in Kenya

"building roads & bridges, contributing to society, putting people first and pursuing CRBC have been well-received by local governments and the people.

CRBC has contracted 30 projects in Kenya, including three port projects, two railway projects, 24 road projects, the Nairobi ICD project and participated in railway operation.

## 中国路桥在肯尼亚

中国路桥于1984年12月在肯尼亚设立办事处。30年来,我们始终秉承"筑路 架桥,奉献社会;以人为本,追求卓越"的企业宗旨,致力于肯尼亚的公路、桥梁、 港口、铁路等基础设施的建设,获得了当地政府和民众的一致认可。

中国路桥在肯尼亚共承建30个项目,其中包括3个港口项目,2个铁路项目, 24个道路项目,内罗毕内陆港建设项目,以及铁路运营。









## **Social Responsibility Management**

The fulfillment of social responsibilities is not only the gateway to achieve sustainable development of the economy, environment and society, but also an inevitable choice for enterprises to realize corporate operations in our management in Kenya. By devoting ourselves to the unification of economic, environmental and social responsibilities, we strive to become an outstanding corporate citizen with greater ability to create values, stronger brand influence and social appeal.

## Our Philosophy

Corporate Mission: To share responsibilities of economic and social development, to participate in coordinated regional development, to provide quality public services for the government

With our comprehensive advantages, we form a community of shared interests with the Kenyan government, expand high-end areas proactively, and develop industries with higher demands to boost local economic development. By taking advantage of the location, the industry, and innovative business models, we hope to boost coordinated regional development. We insist on putting quality first, creating quality projects, and providing Kenya with high quality and efficient public products and services.

### Corporate Vision: Build a More Connected World, Create a More Livable City, Live a Better Life

Based on our business advantages, we contribute to building a more connected world, creating a more livable city, and living a better life. The improvement of transportation and services have promoted industries, and created a large number of jobs. The convenient and efficient logistics infrastructure network has promoted the combination of intermodality and efficient transfer, enhanced comprehensive services of the logistics system, and provided strong support for the transportation of key materials, effectively meeting the demands for production and living.

## 社会责任管理

企业履行社会责任,既是实现经济、环境、社会可持续发展的必由之路,也是实现企业自身可持 续发展的必然选择。我们在肯尼亚的经营管理过程中,主动将社会责任管理融入企业运营,致力, 干实现经济、环境和社会三大责任的有机统一,努力成为更具财富创造力、品牌影响力和社会感 召力的优秀企业公民。

## 我们的理念

企业使命: 经济社会发展急所的责任分担者、区域经济协调发展的深度参与者、政府购买公共服 务的优质提供者

我们充分发挥综合优势,与肯尼亚地方政府形成利益共同体,拓展高端领域,发展更高需求层次 产业,助力肯尼亚经济发展。我们充分利用项目区位优势、产业优势、创新商业模式,助力肯尼 亚区域协调发展。我们坚持质量优先,铸就精品工程,为肯尼亚提供优质高效的公共产品和服务。

### 企业愿景: 让世界更畅通、让城市更宜居、让生活更美好

我们凭借业务优势,为肯尼亚道路畅通、城市官居、生活美好做出贡献。交通运输基础设施的完 善和服务水平的提高,提升了肯尼亚经济运行效率,降低了物流成本,带动了相关产业发展,创 造了大量就业岗位。便捷高效的物流基础设施网络,促进肯尼亚多种运输方式顺畅衔接和高效中 转,提升了物流体系综合服务水平,有力保障了重点物资运输,有效保障和满足了人们的生产生 活需求。



## Our Ability

**Resources integration:** With more than 30 years of experience, we have improved our ability to integrate and allocate resources efficiently along the whole process covering regional development planning, project development, financing, design, procurement, construction, supervision, facilities, investment attraction, operation, service, and withdrawal from the market, efficiently guaranteeing the smooth implementation of all projects.

**Strong and powerful team:** More than 30 years of operation in the international market has enabled us to build up a comprehensive talent pool with rich experience in the international market, strong business competence, familiarity with Kenyan culture and good command of foreign languages, providing strong support for the future development of Kenya.

**Ambition and cohesion:** Forging ahead for the past 3 decades, we have spread the CRBC spirit that highlights the quality to cope with difficulties, make contributions, honor integrity and value partnership. We have also formed a corporate culture that encourages us to overcome all difficulties, and have established a team that is tough, strong, selfless and cooperative.



## Our Way

**Operation in compliance:** CRBC always abides by the laws and regulations, international conventions and business ethics to constantly improve the management system of business development and strictly comply with and study local laws, regulations and customs.

**Integrity and transparency:** CRBC adheres to trustworthy business operations and establishes a corporate image of valuing contracts and keeping promises by adopting openess and fairness attitude and conducting honest and transparent operations.

**Win-win cooperation:** CRBC establishes all-round close relations with the government, enterprises and related organizations to make full use of and integrate various resources to cooperate with related local stakeholders for mutual benefits and common development.

**Long-term development:** During project construction and operation, CRBC considers not only the economic benefits of the project itself, but also the impact of the project on resources allocation of the entire socio-economic system, so as to pursue long-term development.

## 我们的能力

**资源整合能力**: 30 余年的深耕细作,我们提高了资源整合能力。从区域规划策划、项目开发、融资、设计、采购、施工、监理、设施配备、招商,到运营、服务、退出等各环节合理高效地完成资源整合与配置,保证项目的顺利实施。

**人才保障力:** 30 余年的海外经营,我们储备了一批海外工作经验丰富、商务能力突出、 熟悉肯尼亚文化、精通外语的复合型人才,为肯尼亚未来发展提供坚实的人才支撑。

**拼搏凝聚力:** 30 余年的砥砺奋进,我们传递能战斗、甘奉献、讲诚信、重感情的路桥精神,形成了勇于战胜一切困难的拼搏文化,建立了一支能吃苦、能战斗、能奉献、善合作的员工队伍。

## 我们的方式

**合规运营**:始终坚持遵守法律法规、国际公约和商业道德,不断完善业务发展管控制度体系,严格遵守并学习当地法律法规和风俗习惯。

**诚信透明**:坚持诚信经营,用开放公平的态度和诚信透明的经营,树立公司重合同、守信用的企业形象。

**合作共赢**:与政府、企业、有关组织建立了全方位的密切联系,充分利用、整合各种资源,与当地合作,互惠互利,共同发展。

**长远发展**:在项目前期筹划、项目建设、运营过程中不仅考虑项目本身的经济效果,还要考虑项目对整个社会经济系统资源配置的影响,谋求公司在当地的长远发展。



For the past 30 years, CRBC has always upheld the concept of win-win cooperation. We bring China's technologies, management, experience and funds to Kenya, and apply them to the construction of roads and bridges to improve transportation infrastructure of Kenya. Our cooperation projects have set good examples for and exerted strong influence on others, producing lots of economic and social benefits and facilitating win-win and common development with local stakeholders.

Win-win Development with Local Stakeholders

与当地共赢发展

过去30余年,中国路桥秉承互利共赢的合作理念,将中国的技术、管理、经验和资金带到肯尼亚,为肯尼亚改善交通基础设施提供了指导和帮助。我们在肯尼亚开展的项目充分发挥示范效应、外溢效应、辐射效应和联动效应,产生了好的经济和社会效益,实现了与当地各方的互利共赢,共同发展。

## **Providing Optimal Solutions**

During more than 30 years of operations in Kenya, CRBC has always practiced the corporate mission "to share responsibilities of economic and social development, to participate in coordinated regional development, to provide quality public services for the government". In keeping with local laws and regulations, CRBC implements localized management, and fulfilled social responsibilities to vigorously implement strategies for developing international business with the business philosophy of "Building a world-class brand and a century-old company".

## Project planning for long-term development

We actively implement China's strategies for promoting the development of Africa, help African countries promote the construction of high-speed railway network, road network, and regional aviation network as well as industrialization for promoting regional connectivity and capacity cooperation, develop projects significant to Kenya's development, prioritize the implementation of the East Africa Railway Network, and plan special economic zones and industrial parks, so as to accelerate the process of industrialization in Kenya.

### Planning the Nairobi Inland Containers Depot 规划肯尼亚标轨铁路网配套工程

The Nairobi Inland Containers Depot (ICD) is an important supporting project of the Kenya SGR network. Connected by SGR Phase 1, the clearance of cargos can be done at the Nairobi ICD, thus improving the efficiency of clearance of containers and logistics, and reducing freight costs. According to the actual demand of the Kenya SGR, we actively plan and develop upstream and downstream projects related to it. For example, we have signed the contract for the project of installing track girders for the port of Mombasa and scanners within the No. 2 additional agreement of the ICD project to improve the railway transportation system and serve the rapid development of the region.

内罗毕集装箱内陆港(ICD)是肯尼亚铁路网规划的重要配套工程,通过蒙内铁路,货物可以在内陆港进行清关,提升集装箱清关和物流效率,降低货运成本。根据肯尼亚标轨铁路实际需求,我们积极规划开发与其相关的上下游项目,签订蒙巴萨港轨道梁及 ICD 二号附加协议扫描仪建设安装等项目,更好地完善铁路运输系统,服务当地快速发展的需求。



## 提供最优方案

中国路桥进入肯尼亚市场 30 多年来,以做"经济社会发展急所的责任分担者、区域经济协调发展的深度参与者、政府购买公共服务的优质提供者"为企业使命,以合法合规经营为底线、以属地化管理为支撑、以履行社会责任为义务,秉承"树一流品牌,做百年老店"的经营理念,大力实施国际化经营战略。

## 长远发展的项目规划

我们贯彻落实中国对非洲的发展战略,在发展区域互联互通及产能合作领域助力非洲国家推进"三网一化",精心培育肯尼亚发展需求的项目,优先建设东非铁路网,规划经济特区和工业园区,加速推进肯尼亚工业化进程。

## Promoting the inter-connectivity of East Africa through the Kenya SGR 肯尼亚标轨铁路推进东非互联互通

The East Africa Railway runs from Mombasa to Uganda via Nairobi, and then splits into two routes with one running from Uganda to South Sudan and the other from Kampala, Uganda's capital, to Rwanda. The Kenya SGR is an important part of the East African Railway Network, with Phase 1 connecting Mombasa, the largest port city in East Africa, with Nairobi, the capital of Kenya, and Phase 2, an extension of the Phase 1 toward northwestern Kenya, connecting Nairobi with the border city of Malaba. After completion, the Kenya SGR, will link up with that of Uganda, greatly reducing the cost of cross-border logistics transportation, and further promoting the connectivity and integration of East Africa.

东非铁路整体规划从蒙巴萨出发经内 罗毕到乌干达。从乌干达分为两路, 一路向北到南苏丹,另一路向南从乌 干达首都坎帕拉到卢旺达。肯尼亚标 轨铁路是东非铁路网的重要组成部分, 其中,蒙内铁路连接东非最大港口城 市蒙巴萨和肯尼亚首都内罗毕,内马 铁路连接肯尼亚首都内罗毕和边境城 市马拉巴,是蒙内铁路向肯尼亚西北 部的延伸。内马铁路建成后将与蒙内 铁路和乌干达境内铁路接轨,极大降 低跨境物流运输成本,进一步推动东 非次区域互联互通和一体化进程。



## Localized project design

We strive to fully consider the national conditions of Kenya in every project and tailor make every plan to appeal to locals. This ensures that the project creates greater economic, social and environmental benefits.

### Railway design suitable for national conditions 符合国情的设计方案

The choice of diesel locomotives for the Kenya SGR Project over advanced electric railway technology was based on several nation specific considerations:

- Considering the large cargo volume of Kenya and the main single-track railway of Kenya SGR, the internal combustion mainly engines the freight trains.
- With the shortage and instability of power supply, it is too early to establish a railway electrification system in Kenya, as it is unlikely to guarantee stable operation and would require large amounts of electricity which would be harmful to existing grids.
- The cost of the railway electrification system is high and the investment pay-back period is long. This would result in lower economic benefits to the employer.

We insist on the most suitable technical standards for projects in Kenya, and reserve sufficient equipment for future development of the Kenya SGR, such as conditions for double-track railway, electrification and wiring. Once the conditions are favorable, the SGR can be upgraded to a continuous welded rail (CWR), double-track railway or electrified railway. The current SGR design can help Kenya develop even faster within its prescribed development timelines.

由于中国高铁技术在国际上知名度越来越高,当首批内燃机车交付的时候,有人质疑中国并未将最先进的铁路技术带给他们。

### 为何是内燃机而不是电气化铁路?

- ◆ 考虑到肯尼亚货运运输量,肯尼亚标轨铁路是货运为主的单向铁路线,货运列车应以内燃机为主。
- ◆ 肯尼亚全国的电力接入率刚实现 56%,在电力供应短缺和不稳定的情况下,贸然建设一条电气化铁路,一方面难以保障铁 路的稳定运营,另一方面对既有电网也会造成损伤。
- ◆ 电气化铁路成本高,投资回报期过长,对业主方的经济效益不足。

我们坚持最适合肯尼亚地方实际情况的技术标准,为肯尼亚标轨铁路的发展预留了充足的条件,预留了双线铁路条件和电气 化条件,车站也预留了接线条件等,一旦条件成熟,标轨铁路可以升级为双线铁路和电气化铁路。这种设计符合肯尼亚现阶 段经济发展需要,能够助力肯尼亚快速发展。

## 量体裁衣的项目设计

每一个项目,我们尽量充分考虑肯尼亚国情;每一个方案,我们都是"量体裁衣",努力让项目创造更大的经济、社会和环 境综合效益。

### Highway technology meeting the demand of local transportation 适应当地运输需求的工艺技术

The A109 Highway whose construction began in 1998 is Kenya's most important traffic artery and is the international traffic lifeline linking the Indian Ocean and the hinterland of Africa. From Mombasa, the largest port in East Africa, to Nairobi, most of the traffic on the road is caused by heavily loaded trucks from the port of Mombasa and this has a negative impact on road quality.

1998 年开建的 A109 国道是肯尼亚最 重要的交通主干道,是连接印度洋和 非洲腹地的国际交通命脉。从东非第 一大港蒙巴萨到首都内罗毕, 这个路 段往来车辆大部分是蒙巴萨港的重载 货车,这对公路质量要求很高。

考虑到这个因素, 筑路过程中, 我们 采用当地先进的路需再生铣刨工艺、 宽幅路面一次摊铺成型工艺,在保证 工程质量和施工期内交通畅通的前提 下,在两年半内完工。

With this in mind, we applied the local advanced milling technology and onestep wide road paving technology in building the road. Within two and a half years of construction, we guaranteed the quality of the project and the smooth flow of traffic during the construction period.

In his speech at the road's opening ceremony retired Kenyan President Daniel Moi lauded our efforts by

时任肯尼亚总统的莫伊在通车仪式演 讲中称赞: "如果所有的承包商都能 像中国路桥这样,会让肯尼亚更快、 更好地发展"。A109国道建成几年后, 为纪念这一高品质公路, 巩固中肯传 统友谊,肯尼亚政府发行了以 "CHINA ROAD"为主题的邮票。

saying: "If the other contractors are as reliable as CRBC, Kenya will develop faster and better." A few years after the completion of the A109 road, the Kenyan government issued a series of stamps with the theme of CHINA ROAD to commemorate this highquality road and consolidate the traditional friendship between China and Kenya.





## Projects with higher standards

We have established a complete quality management system in every project Head Office in Kenya. This has given us better control over the process, helped us tighten procedures of inspections and acceptance and enabled us to overally improve quality awareness in order to construct better project. At the same time, we emphasize the leading role of technology and technological innovation and take initiative to meet higher construction standards while fulfilling contracts, which has enabled us to build high-quality and long-lasting projects for Kenya.

## Tackling difficulties of pile sinking in areas of coral limestone during the construction of the first three berths at Lamu Port 拉姆港 1—3 号泊位项目解决珊瑚石灰岩地区沉桩难题

To tackle difficulties of pile sinking in areas of coral limestone during the construction of the first three berths at Lamu Port, we cooperated with famous scientific research institutes in the industry. Together, we studied changes in the parameters of foundation piles in the pile-sinking process as well as the penetration performance and energy transfer coefficients of rock formations of the foundation pile with a pre-installed sensor. Based on results of the study, we made targeted adjustments and finally ensured that the static load test of the foundation pile met the bearing capacity requirement. This guaranteed the efficiency of pile sinking and the completeness of the foundation pile, effectively improving the quality and benefits of the project.

在拉姆港 1—3 号泊位项目建设中,面临"珊瑚石灰岩地区沉桩工作"的技术难题,我们与业内著名的科研机构合作,研究预先埋设传感器研究沉桩过程基桩的参数变化、总结基桩岩层的穿透性能和能量传递系数等关键问题,并进行针对性调整,最终基桩的静载荷试验满足承载力要求,保证沉桩效率和基桩完整性,有效提升了项目建设的质量和功效。

## 高于标准的项目建设

我们在肯尼亚的每一个项目部都建立了完善的质量管理体系,狠抓过程控制,强化检查验收,提高思想意识,创建精品工程。同时,我们加强技术引领和科技创新,主动提高建设标准,为肯尼亚建设经得起考验的高品质工程。

## Meeting higher standards in the SGR Phase 1 主动提高蒙内铁路项目建设标准

The SGR Phase 1 is contracted by us in the Engineering Procurement Construction(EPC) mode. According to international practice, the project contractor is fully responsible for the safety, quality, progress and cost of the project. During construction, we took the initiative to increase the construction standards and costs for constructing a high-quality project.

Nairobi Terminus is a transport hub along the SGR Phase 1. Though the design of the station required in the EPC contract is simple, we took the initiative to raise the standard and changed the external design of the station to resemble a "bridge" and a "locomotive", which implies "friendly cooperation between China and Kenya" and "accelerated economic development in Kenya". For the internal design of the station, we relied on China's high-speed railway stations, and imported luggage inspection machines and check-in equipment to better serve people's travel, keep a harmonious relationship with the surrounding environment and reflect the image of a thriving Kenya. Other stations also have their own unique characteristics and have been scenic spots along the railway.

蒙内铁路项目由我们以EPC模式总承包,按照国际惯例,项目承包方对工程的安全、质量、进度和造价全面负责。在实际施工中, 我们主动提高建设标准,增加造价成本,打造高质量工程。

内罗毕南站是蒙内铁路的枢纽站,也是蒙内铁路的终点站。该车站的设计在 EPC 承包合同标准中较为简单,我们主动提高标准,车站外部设计以"桥梁"和"火车头"为象征,寄予"中肯两国友好合作"和"肯尼亚经济加速发展"的寓意,车站内参考中国高铁车站的格局,从中国引进行李安检机、闸机等设备,让车站更好地服务人们生活,并符合周边环境和肯尼亚蓬勃发展的精神。其他车站也各有特色,成为铁路沿线的一道道风景线。



## **Maximizing Technology Transfer**

and have actively explored approaches to manage local employees from the aspects of recruitment, training, assessment, incentives, etc. This guarantees a strong talent pool for project construction and operation, and facilitates the gradual transfer long-term development.

## Employee training

our Chinese employees to teach technologies to local employees through mentoring and training. At the same time,

cultivating those at positions of physical labor into technical or management positions that require more technical skills. We also carry out special employee training programs to develop local professional and technical personnel, and

### Alfred Mitei – from an intern operator to an experienced technical worker Alfred Mitei: 从实习操作员到技术熟练工

In 2011, Alfred Mitei was an intern operator of a crawler crane at the 19th berth of the Port of Mombasa. In 2015, he joined the construction project of the first three berths at Lamu Port, and under the patient guidance of his Supervisor Zhang Zhigang, his

师傅张志钢的悉心指导下快速成长,现在已经熟练掌握机械操作流程和技巧,懂得保养设备和小故障维修,能够独立操作 150T 起重机。



## 最大程度实现技术转移

中国路桥自 1984 年进入肯尼亚市场以来,不断提升人力资源属地化管理,从招聘、培训、考核、激励 等方面积极探索当地雇员的管理方法,为项目建设和运营奠定当地人才基础;推动中国施工工艺、规 范标准、管理经验等逐步向肯尼亚转移落地,助力肯尼亚的自主、长远发展。

## 员工培养

我们发挥中方员工的"传、帮、带"作用,通过师徒帮扶、学校培训等方式,传授工艺技术。同时, 我们注重培养重点人才,为工作能力和责任心强的雇员提供晋升机会,把当地员工从基础的体力劳动 者逐步培养成为能够胜任技术含量较高的技术、管理人才; 开展专项的员工培训项目, 有意识地培养 当地专业技术人才,系统深化对当地的技术转移。

### Allan – growing into a metering engineer 成长为计量工程师的艾伦(Allan)

At the peak construction period of the Nairobi Southern Bypass project, there were more than 1,800 local employees, accounting for approximately 96.7% of the total number of employees in the project. More than 100 local employees undertook different management positions in offices, workshops, prefabrication yards, stockyards, mixing plants, road paving groups and structure groups, and many of them gradually grew into backbone employees after gaining experience from multiple projects. Allan joined the Company in 1999 as a messenger, and was gradually promoted to junior clerk of the office, department manager assistant and is now the current metering engineer.

内罗毕南环城路项目最高峰时当地员工 1,800 余人,占项目员工总数的约 96.7%。上百名当地员工从 事办公室、车间、预制场、料场、拌合楼、路面组、结构组等不同类别的管理工作,其中有不少是经 历多个项目之后,从普通工种逐渐成长为项目骨干。其中,艾伦(Allan)自 1999 年加入公司以来, 逐步从送信员、办公室初级文员、部门经理助理晋升为目前的计量工程师。



The SGR Phase 1 operation consortium focuses on technology transfer and personnel training. The consortium formulates categorized training according to the individual's learning ability and skills. For example, the consortium organized skill competitions to select backbone employees and systematically cultivate employees in positions requiring higher professional skills, so as to establish a complete talent echelon and lay a solid foundation for the independent railway operation by related local organizations.

"I participated in the driving training in Baoji, China, and became one of the first batch train drivers of Kenya's modern railway system. We will become trainers in the future for others."

Alice,One of the first 7 female train drivers of Kenya

蒙内铁路运营联合体坚持以技术转移和人才培养为工作核心,根据学员的个人学习能力和技能掌握情况,分类制定培训计划,如组织技能竞赛选拔骨干,对专业性较强的岗位进行系统培养等,以建立完整的铁路运营人才梯队,为当地独立运营铁路打好基础。

"我在中国宝鸡进行了驾驶培训,我们是肯尼亚现代铁路 系统的第一批人才,未来将成为老师。"

──肯尼亚历史上首批 7 位女列车司机之一 艾丽丝



On construction phase, CRBC has always given priority to technology transfer. It has helped local workers improve their skills through mentoring and training, and has provided local students with many opportunities for practice, effectively improving their employability.

Richard Berio Kipsang, Principal Secretary, Ministry of Education, Kenya





## Employee motivation

10 years, thus creating a good environment for the sustainable development of local employees.

### Stimulating the potential of employees with the Good Advice Award "合理化建议奖"激发员工潜力

部还对表现优异的当地员工授予"项目之星"光荣称号,给予奖金奖励,同时设立"合理化建议奖", 鼓励员工提出合理化建议, 激发员工潜力。

文森是项目上的"节能小管家"。他向项目部建议,在饮用水箱下面设置管道,将现场饮水时溢出的 予文森特"合理化建议奖"。

## 员工激励

为激励当地员工成长成才,我们设立各类员工激励奖项,表彰项目部优秀员工,激发当地员工潜力, 调动其工作积极性。2010年,我们专门设立"资深员工奖",表彰和激励为公司服务 10年以上的优 秀员工,为属地员工创造可持续发展的良好环境。

### **Growing together with CRBC** 与中国路桥一同成长的肯尼亚人

In its 34 years in Kenya, CRBC has attracted a group of loyal local employees who have engaged in the Company's projects all around the country. More than 100 employees have worked for CRBC for over 10 years, with the longest being 25 years. This job enables them to master a professional skill and help create a better life for them and their families. At the same time, they feel very proud to have the chance to contribute to the construction of their own country.

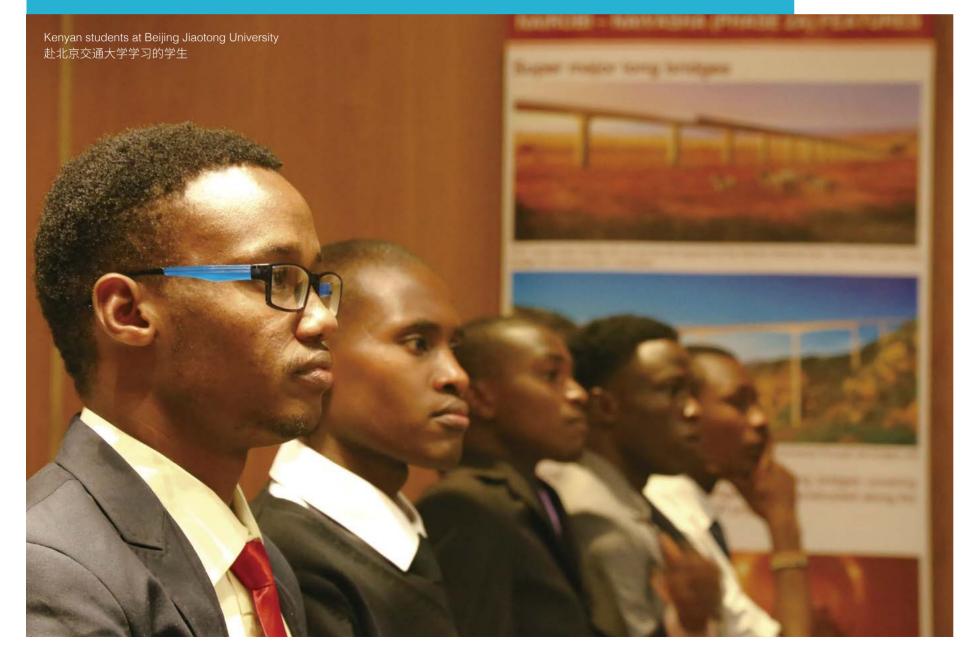
中国路桥在肯尼亚发展的 30 多年间,有一批忠实追随的当地员工,他们随着公司的项目辗转各地,有 100 多名员工在公司工作 10 年以上,其中最长的已经有 25 年。在他们看来,这份工作使他们拥有一 技之长,给自己和家人带来更好的生活,同时能够为自己国家的建设贡献一己之力,使他们感到非常 骄傲。



## Reserving talents

We not only teach technologies to local employees through training, but also systematically train local talents to master the technologies of transport infrastructure construction by establishing practice bases in universities, funding outstanding students for further studies and running schools with local education institutes, etc. This helps us to promote local employment, and reserve sufficient talents for the construction of transport infrastructure of Kenya. Some examples include:

- Establishing practice bases in universities to employ students from University of Nairobi, Moi University, Kenyatta University, Kenya Industrial Training Institute and other universities as interns, and cultivating them into professional engineering and technical personnel through learning construction management and technical knowledge and practice.
- Fully sponsoring 100 outstanding Kenyan students to major in Railway Engineering at Beijing Jiaotong University, who will serve the East Africa Railway Network after their 4-year study.
- Carrying out in-depth cooperation with Southwest Jiaotong University and Kenya Railway Training Intitute to help Kenyan universities establish railway engineering majors to train talents for future development.



## 储备未来人才

我们不仅通过培训方式将技术传授给当地员工,还通过建立大学生实践基地、资助优秀学生深造、联合办学等方式,系统培养掌握交通基础设施建设技术的当地人才,在促进当地就业的同时,为肯尼亚交通基础设施建设储备丰富的人才。

- 建立大学生实践基地,接收来自内罗毕大学、莫伊大学、肯雅塔大学、肯尼亚工业培训学院等学校 的在校生前来实习,通过学习实践施工管理和技术知识,培养成为专业的工程技术人员。
- ◆ 全额资助 100 名优秀学生前往北京交通大学接受 4 年的铁路相关专业本科教育,全面学习中国铁路技术,未来服务肯尼亚国家发展。
- ◆ 与西南交通大学和肯尼亚铁路培训学校深入合作,帮助肯尼亚高校创建铁路工程专业,培养未来 人才。





China Road and Bridge Corporation Social Responsibility Report in Kenya 中国路桥肯尼亚社会责任报告

### Win-win Development with Local Stakeholders 与当地共赢发展 2

## **Spreading Influence**

For more than 30 years, we have built more than 20 road projects and 3 port projects in Kenya, and built the first new railway government, the expectations of stakeholders, and the current economic and social development, we try to tap the potential of

## Consolidating Kenya's Status as a Logistics Hub

Kenya has an unparalleled geographical advantage among East African countries. Starting from road, railway, port and other and urban facilities, aiming to build Kenya into the gateway of East Africa. This will effectively consolidate Kenya's status as a

### Roads

port Mombasa and the capital, Nairobi, and connects the northwest to Uganda through the A104, and Ethiopia and traffic lifeline linking the Indian Ocean and the hinterland of

an important part of Kenya Vision 2030. Since completion, the bypass has relieved a lot of traffic off municipal roads

at the town of Kikuvu located to the northwest suburb of Nairobi. The project lessens traffic congestion in Nairobi and

### Railways

The SGR Phase 1 connects Mombasa, the largest port in equipment at Nairobi ICD, the SGR Phase 1 has significantly increased freight transportation efficiency while reducing capacity of the port of Mombasa.

city in Uganda, and is the extension line of SGR Phase 1 to the northwest of Kenya. The construction of SGR Phase 2A is divided into three phases. The SGR Phase 2A extends 120 km from Nairobi to Naivasha and is currently under

The 19th Berth of Mombasa Port has the deepest dock basin among all berths along the East African coast. It handles can now accommodate three freight ships of more than 200 meters long at the same time, greatly reducing the congestion of the port and shortening the waiting time.

The project of the first three berths at Lamu Port, Kenya, is the starting point of LAPPSSET (Lamu Port - South Sudan -It will provide new access to the sea for South Sudan, Ethiopia, Uganda and eastern Congo, promote the scale of the regional market as well as regional economic and trade

## 最广范围释放影响

30 余年来,我们在肯尼亚承建了20 多个公路项目,3 个港口项目,为肯尼亚修建了近百年来新建的第一条铁路。我们最大 程度地结合运营所在地政府的经济社会发展规划、利益相关方期望、经济社会发展实际等因素,挖掘生产运营每一个环节的 潜力,释放每一个项目的积极影响。

## 巩固肯尼亚物流枢纽的地位

肯尼亚在东非国家中拥有无可比拟的地理优势,我们以公路、铁路、港口等交通运输基础设施为基础,逐步向园区、城市开 发的综合一体化模式发展,巩固肯尼亚物流枢纽地位,联通世界促进发展。

### 公路项目

1998年开建的 A109 国道是肯尼亚最重要的主干道,它连 接肯尼亚最大港口蒙巴萨和首都内罗毕,并通过 A104 向西 北通往乌干达、通过 A2 向北通往埃塞俄比亚等东非国家, 是连接印度洋和非洲腹地的交通命脉。

2009 年开建的内罗毕东北环城路是该地区修建的第一条环 城道路,该项目也是肯尼亚 "2030 远景规划 "的重要组成 部分。道路建成通车,为肯尼亚内罗毕市区道路和 A2 国道 交通提供了优质的绕城交通疏解方案,有效疏通了内罗毕 严重的交通拥堵状况,带动了当地经济蓬勃发展。

2012年开建的内罗毕南环城路项目,全长28.6公里,始 于蒙巴萨路,终于内罗毕西北市郊的基库尤镇。该项目与 2012年建成完工的东北环城路相连,为肯尼亚内罗毕市区 的过境集装箱运输车提供了一条高质量的快速绕城通道, 不仅有效缓解了市内交通压力, 为当地市民的工作和生活 提供了便利,而且极大地促进了当地经济的蓬勃发展。

### 铁路项目

蒙内铁路连接东非最大港口城市蒙巴萨和肯尼亚首都内罗 毕, 货运时速为 80km/h, 配合现代化的调度、控制等系统, 以及内罗毕ICD完善的铁路到发、装卸设施和集装箱装卸 搬运设备,大幅提升了货运效率,降低物流成本,提升蒙 巴萨港的吞叶能力。

内马铁路项目位于肯尼亚共和国西北部,连接肯尼亚首都 内罗毕和边境城市马拉巴, 是蒙内铁路向肯尼亚西北部的 延伸,分三期建设。内马铁路一期项目从内罗毕至纳瓦沙, 全长 120km, 目前正在建设中。

### 港口项目

蒙巴萨港19号泊位是目前东非海岸港口中港池最深的泊位, 每年可为蒙巴萨港新增25万个集装箱。有了19号泊位, 蒙巴萨港现在可同时接纳3艘超过200米的大货船,极大 地降低了港口船只拥堵程度,缩短了等待时间。

肯尼亚拉姆港 1-3 号泊位项目属于非洲大陆最大工程—— "拉姆港 - 南苏丹 - 埃塞俄比亚运输走廊项目" (LAPSSET) 的起点,能够为南苏丹、埃塞俄比亚、乌干达以及刚果东 部提供新的出海通道,扩大区域市场规模,促进地区经贸 往来。

## Driving local economic development

boosted the improvement of economic operations, reduced logistics costs and driven the development of

### **Boost local suppliers**

We do our utmost to cooperate with local suppliers in procurement of different categories of products and services in Kenya, such as materials, equipment, machinery, etc. Large-scale procurement has effectively economy. At the same time, requirements on high quality of products and low pollution have prompted local suppliers to improve their existing production models and technical standards, increase investment

### Supplier promotion drives local purchasing

召开供应商推介会,加强本地采购

Paying attention to communication and cooperation with local suppliers, we held major supplier promotions at the beginning of the Kenya SGR project, introducing the overall situation of the project,

我们注重与当地供应商的沟通合作,在肯尼亚标轨铁路项目之初召开大型供应商推介会,介绍项目的 总体情况和所需采购的物资设备信息。在项目实施过程中,根据各标段的实际情况多次开展小型供应 商推介会,包括人力资源推荐会、分包商推荐会、物资推荐会等,促进供应商提升技术、管理和服务能力。

## 带动当地经济发展

30 余年来,我们不断完善肯尼亚交通运输基础设施,促进多种运输方式顺畅衔接和高效中转,推动提 升经济运行效率,降低物流成本,带动相关产业发展,惠及当地人民。

### 带动供应商发展

我们尽最大努力与当地供应商开展合作,在肯尼亚当地采购材料、设备、机械、服务等不同类别的产 品或服务。大量的当地采购,有效促进了当地企业的快速发展,带动了当地经济的蓬勃发展。同时, 高质量、低污染的产品要求,促使当地供应商改良原有的生产模式和技术标准,加大投入,引进新技术, 提高行业的整体技术水平。

"We provide container transportation of materials, bulk materials, heavy equipment, etc. for CRBC, which has not only gained profits and enhanced brand awareness for us, but also improved our internal management, service quality and working efficiency."

Business and Marketing Director of Freight Forwarders, a local transportation company

"我们为中国路桥提供集装箱运输物资、散装材料、重型设备等的运输,不仅收获了利润和品牌 知名度, 还提升了我们的内部管理、服务水平和工作效率。"

——当地运输企业 Freight Forwarders 的商务和市场总监



### Driving local economic development along the projects

economy and service industry.

### Driving the development of the restaurant industry along the railway 带动铁路沿线周边餐饮业发展

restaurant business improved significantly. The Athi River Super Bridge is the longest bridge of the The SGR Phase 1 and more than 400 workers worked here during the peak construction period. At lunch time.

快餐店的生意变得异常火爆。阿西河特大桥是蒙内铁路全线最长的桥梁,施工高峰期工人达 400 多人, 一到吃饭时间,就餐的工人排队都排到马路另一边去。

Richard

---理查德

# 

### 带动项目沿线经济带发展

我们建设的公路、铁路以及港口项目完善了当地交通基础设施,对产品加工基地、物流园区、产业开 发区等各类工业园区的建设起到促进作用,带动当地工业、服务业的加速发展。

### Nairobi Eastern & Northern Bypass project drives local economic development 内罗毕环城路项目带动周边经济发展

Prior to the completion of the Nairobi Eastern & Northern Bypass project, the undeveloped transportation facilities have long hindered the development of suburban areas of northeastern Nairobi. It took residents several hours to reach the downtown of Nairobi for shopping, medical care and schooling. After opening the Eastern & Northern Bypass, schools, hospitals and numerous shops have been opened along the route, thus reducing damage to vehicles as well as fuel consumption significantly.

内罗毕东北环城路建成前,交通设施的落后让内罗毕城东北部郊区长时间处于发展滞后状况,沿线居 民购物、求医以及上学等均要乘车数小时前往内罗毕市中心。东北环城路建成通车后,沿线增添了学校、 医院和众多店铺,车辆出行的损毁和油耗也明显降低。



## Making residents happier

We have created thousands of job opportunities and increased the income of local residents during project construction. Our projects have made Kenya's traffic more convenient and efficient, improved the overall service quality of the logistics systems, and effectively ensured and satisfied people's needs for production and living, thus also bringing them greater happiness.





### 提高居民幸福指数

我们在项目建设过程中,创造大量就业岗位,增加居民收入。公路、铁路、港口项目,让肯尼亚交通更加便捷高效,提升了物流体系综合服务水平,有效保障和满足了人们的生产生活需求,提高了居民的幸福指数。

Reducing traffic in cities and making residents happier 缓解市内交通,提高幸福指数

Before the completion of the Eastern & Northern Bypass, it took at least 3 hours by car from the Airport Road to Thika Road. Now, it only takes 30 minutes. In the past, a local resident Wendy living along the Eastern & Northern Bypass got up at 4am to get her workplace every day. After the completion of the project, she can now get up at 6am, take her breakfast and a shower unburriedly before setting off for work. It takes her only 20 minutes to arrive at her office.

内罗毕东北环城路建成之前,从机场路到西卡路至少需要 3 个小时车程,现在只需 30 分钟。以前,在东北环城路沿线居住的当地居民温迪,每天凌晨 4 点起床去上班,东北环城路建成后,她现在可以早上 6 点起床,从容地吃过早饭,再洗个舒服的热水澡。20 分钟就能准时到达上班地点。

"The road built by the Chinese people is like a rainbow. Even in the most troublesome rainy season, it guides us to our destination smoothly."

"中国人修筑的这条路像一条彩虹,即使在最头疼的雨季,也为我们指引出一条畅通无阻的希望之路。

——温迪

Wendy

注: 以上文字摘自《人民日报》文章: 使命与责任诠释大爱风采

"In the past, many local Maasai people did not have a job, and mostly resorted to herding. Only a small number of them worked in Mombasa. CRBC projects have brought many jobs to the local community, allowing us to work right next to our home and learn many skills. We have witnessed Chinese' diligence and selflessness. They imparted all their skills selflessly, offered sincere help, and have brought us a different world. We like to work with Chinese people. Thank you so much!"

Gibb, Chief of a Maasai tribe and an equipment manager

"以前当地大部分马赛人都没有工作,只能以放牧为生,只有很少一部分人去蒙巴萨工作。中国路桥公司的到来给当地带来了就业,让我们在家门口就可以工作,而且可以学到技能。我们亲眼目睹了中国的勤奋和无私,他们毫无保留地将技能传授给我们,帮助我们,使我们看到了不一样的世界,我们喜欢和中国人一起工作,感谢你们!"

——马赛酋长兼设备管理员 吉布

"From Nairobi to Mombasa, it takes ten hours by bus, while the express train takes only about five hours and the intercounty train needs about six hours. On the train, we can enjoy the scenery along the way and communicate with fellow passengers."

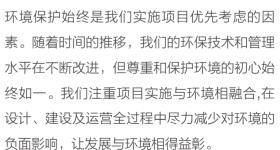
Gomba, a passenger aboard the train in the SGR Phase 1

"从内罗毕到蒙巴萨,直达列车需要约5个小时,非直达列车则约需6个小时,而长途汽车往往需要10个小时。在列车上,我们可以欣赏沿途的风景,还可以与人深入交流。"

——蒙内铁路列车乘客 贡鲍

注:以上文字摘自《经济参考报》文章: "中国造" 蒙内铁路激活东非商业版图





## **Protecting Nature from the Source**

pollutants at their source while designing projects and actively integrate ecological requirements into the project is put into operation.

We invite professional design companies to provide an environmental protection plan for each project, Report and suggestions in the feedback. During construction phase, we constantly improve the design the implementation construction organization design, we put forward clear and effective environmental protection solutions in light of the characteristics of the project and the Company's environmental protection management requirements. Plans that are found unsuitable are not approved to begin

Reducing the impact on the mangrove forest during the construction of the first three berths at

拉姆港 1-3 号泊位项目从设计源头减少对红树林的影响

to the land and the stockyard through an approach road, so as to minimize damage to the mangroves.

拉姆港 1-3 号泊位项目所在地靠岸部分为成片红树林,为了减少对红树林的影响,项目在设计时将码 头往海侧移动,通过引堤道路将陆地与堆场连接,尽量减少码头回填对红树林的破坏。



## 从源头热爱自然

热爱、尊重,是我们对环保最真挚的态度。我们严把设计环保的"源头关",主动将生态环境保护要求融入项目设计,注重 减少项目施工过程及后续投入运行后对当地自然环境的影响。

我们安排专业的设计单位对每个项目进行环境保护方案的设计,并根据《环境影响评价报告书》及批复意见的要求,明确、 细化环保设计方案。在施工过程中我们不断完善环保工程设计,参与环保工程验收评定;在编制实施性施工组织设计时,结 合工程项目特点和公司环保管理要求,提出明确和切实有效的环保措施;对于不符合环保要求的施工组织设计方案我们将不 予批准施工。

### Creating harmony between the project design and environmental protection from the source 从设计源头实现项目与环境保护的协调统一

For the Kenya SGR Project, after comprehensive and careful consideration, we took "environmental protection" as the premise and guidance for establishing bridges and roads after investigation and exploration. We fully took into account the protection of the natural environment and wildlife in design, trying to reduce or avoid the project's impact on the natural landscape and the habits of wildlife.

肯尼亚标轨铁路项目通过细致调研和严谨勘探,充分谋划和细致考虑,在设计阶段将"绿色环保"作为定桥开道、筑路建基 的前提和指导,设计中充分考虑自然环境和野生动物保护,尽量避免和减少对天然景观和野生动物生活习性的影响。

### Harmony between the appearance of stations and the natural environment 车站外观与自然环境的融合

The Mombasa West Railway Station is surrounded by mountains and rivers. Facing the ocean and a mountain, the station becomes part of the natural landscape and adds more charm to the natural environment.

蒙巴萨西站依山傍水,充分融入当地海洋和自然山体景观,创造环境宜人的山海景观型火车站。

### Building on existing traffic corridors to reduce the impact on the ecology 线路考虑既有交通走廊,减少生态影响

While designing the project, we fully considered the impact that might be caused to environmentally sensitive areas such as wildlife reserves, and while selecting the routes, we prioritized existing traffic corridors to reduce secondary division of the entire ecological system of the reserve.

方案设计时充分考虑对野生动物保护区等环境敏感区的影响,选线设计重点考虑合理利用既有交通走廊,以减少对 保护区整体生态系统的二次分割。

### Building wildlife channels to facilitate the migration of animals 设置动物通道,方便动物迁徙

According to migratory species and migration paths of wildlife in the wildlife reserves along the railway, wildlife's demand on drinking water and the locations of rivers and ditches, we set up a certain number of wildlife channels and guiding facilities to guide animals to cross the rail safely. We also set up fences on both sides of the railway to prevent crawling animals from colliding with the train.

根据沿线的野生动物迁徙种类和迁移的路径,以及生存饮水的需要,结合河流、沟渠设置了野生动物通道,设置引导设施, 引导动物安全穿过线路。线路两侧设置隔离栅栏,以避免动物爬行通过,减少动物与列车相撞机率。

> Integrating environmental protection concepts into project design 设计环节融入环境保护理念

## China Road and Bridge Corporation Social Responsibility Report in Kenya 中国路桥肯尼亚社会责任报告

# Minimizing the Impact of Construction on the Environment

We actively protect the environment and do our best to minimize our impact on the environment while making the project plan, carrying out project construction and during project operation.

The Safety and Quality Department of CRBC in Kenya is responsible for the overall inspection and supervision of environmental protection. It guides all project departments to work out environmental pollution prevention and control measures and carries out publicity and education on environmental protection to enhance employees' awareness of environmental protection. All project departments set up environmental protection control targets to strengthen environmental protection, prevent pollution incidents, and eliminate ordinary and major environmental accidents, according to which we actively implement ecological protection, dust control, land resource protection, domestic waste management and other environmental protection measures in project implementation.

## Preventing pollution during concrete construction in the ICD project ICD 项目混凝土施工防污染

In the ICD project, a settling pond was set up at the concrete mixing station to precipitate the waste generated during the mixing process, and to carry out centralized treatment of the waste water and solid waste generated during the precipitation process to avoid environmental pollution. Before transportation of the concrete, the hopper of the tanker was cleaned to avoid pollution caused by falling concrete during the transportation process. Solid waste generated at the construction site was disposed through landfills, effectively reducing pollution to the environment.

ICD 项目在混凝土拌合站设立沉淀池,对混凝土拌合过程中产生的废料进行沉淀处理,对沉淀后的废水及固体废弃物进行集中处理,避免造成环境污染。混凝土运输前对罐车下料斗进行清洗,以免运输过程中混凝土洒落造成污染,并对施工现场产生的固体垃圾进行集中掩埋处理,有效减少了环境污染。

Environment-oriented Construction and Operation 以环境为先的建设运营

## 最小化施工的环境影响

我们积极开展自然生态保护,做到环境保护与工程同时规划、同时施工、同时运营,尽最大努力,把环境影响降到最低。

中国路桥在肯尼亚的工程安质部,整体负责环境保护工作的检查和监管,为各项目部制定环境污染防治措施提供指导,大力开展环境保护宣传教育,提高员工环保意识。各项目部制定了"强化环境保护,严防污染事件;杜绝一般及重大(含)以上突发环境责任事故"的环境保护控制目标,并在项目实施过程中,以目标为指引,积极开展生态保护、扬尘治理、土地资源保护、生活垃圾管理等环保措施。

### Construction preparation stage

### 施工准备阶段

- ◆ 建立和健全水保组织管理体系、规章制度,并开展环水保培训;
- ◆ 施工方案提出明确和切实有效的水保措施;
- ◆ 开工前分指挥部对生态环境敏感点进行检查、审核。
- ◆ The project department establishes and improves environmental protection and water conservation management systems and regulations, and organizes environmental protection and water conservation training.
- The construction plan proposes and clarifies effective measures for environmental protection and water conservation.
- The Branch Office inspects ecologically and environmentally sensitive places before the construction starts.

### Construction stage

### 施工阶段

- ◆ 做好取土场的坡面、地面的平整和必要的挡护及截排水设施,结合周边自然环境,分别采取复耕、造地或植物防护;
- ◆ 做好截排水设施,并因地制宜的采取植物防护措施。
- Flatting slopes and ground at the borrow pits, installing necessary water draining facilities, and carrying out reclamation, land creation and plant protection according to the peripheral natural environment.
- Installing water draining facilities and adopting plant protection measures according to actual natural conditions.

### Closing stage of the construction

### 施工收尾阶段

- ◆ 施工结束后,及时组织开展对施工临时设施的环境恢复工作,及时进行迹地整治,采取恢复原有土地使用功能或恢复植被等。
- After the construction is completed, removing temporary construction facilities, restoring the environment and improving the slash-and-burn forest by restoring the original function of the land and restoring the vegetation in time.

Some environmental protection measures during project construction 施工过程环境保护的部分措施

### Multiple environmental protection measures for the project of the first three berths at LAMU Port 拉姆港 1-3 号泊位项目开展多项环保措施

Air pollution not only endangers the local living environment, but also affects the physical and mental health of locals. The project department took measures to reduce dust and air pollution, such as sprinkling water on the main roads and roads leading to the construction site, using water guns to spray water, install spraying system around the temporary belt conveyor for conveying sand and gravel, and so on. The project department also set speed limit signs and deceleration zones on roads, and strictly emphasized on driving under the speed limit and minimizing dust among all drivers.

suspended solids, turbidity, content of dissolved oxygen, etc. to reduce the impact on the surrounding aquatic organisms.

空气污染不仅危害当地的生活环境,更会对当地居民的身心健康造成影响。在拉姆港施工现场,项目部实施全方位降尘处理, 如安排洒水车及高压水枪实现日常降尘、在临时码头皮带机周围设置喷淋系统等。同时,在道路上设置限速标志牌及减速带, 并严格要求司机限速行驶,尽可能减少扬尘。

项目部在油库加油口等有油料泄漏风险的位置设置托油盘,防止漏油造成土壤污染或者海洋污染;在海上船舶机械设备周围 设置集油槽,防止油污溢流至海洋。定期邀请肯尼亚标准局至现场采样,监测海水 pH、悬浮物、浊度、溶氧量等,减少对

### Maintaining ecological balance during construction of the 19th berth of the Port of Mombasa 蒙巴萨 19 号泊位项目维护生态平衡

Kenya attaches great importance to environmental protection. The project department of the 19th berth of the Port of Mombasa, the dredging project with the closest relationship with environmental protection in Kenya, sampled the water in the construction area every half a month for third-party quality test to ensure that the water was not contaminated. Since long-term sludge dumping may cause damage to the large number of coral reefs in the construction area and lead to ecological imbalance, the project department actively communicated with the National Environment Management Authority and moved the dumping site to another place with few coral reefs as an effort to protect the local ecological balance.

肯尼亚非常注重环境保护,蒙巴萨 19 号泊位施工建设与环保关系最大的为疏浚施工。项目部每半个月 对施工区水质进行取样送第三方检测,以确保水质没有受到污染。由于施工卸泥区区域珊瑚礁很多, 长期卸泥对珊瑚生长不利,可能导致生态不平衡,项目部主动与环保局沟通,将卸泥区移至外海珊瑚 礁不多的区域,保护了当地的生态平衡。

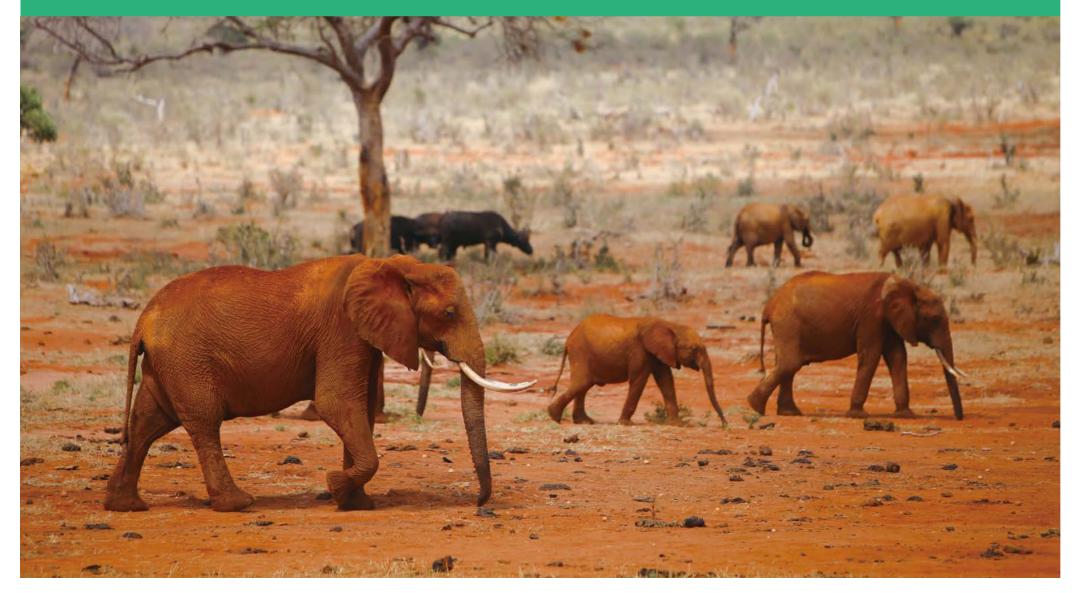


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# **Promoting Environmental Protection through Actions**

We promote the concept of green living and green operations, and make great efforts to reduce the impact on the environment caused by our consumption of resources for the realization of a low-carbon life. We enhanced our awareness of environmental protection and actively participated in various local environmental protection and public welfare activities, so as to fulfill our environmental responsibilities and promote the ecological progress.

- Promoting green office: We promoted the use of energy-saving and environmentally friendly office materials and recyclable materials, increased the procurement of energy-saving construction materials, and strengthened the quota management and assessment of official vehicles.
- Enhancing the awareness of environmental protection: The project department regularly invited wildlife protection experts or animal protection organizations to conduct publicity activities on wildlife protection in camps and construction sites.
- Participate in environment protection and public welfare activities: We sponsored and participated in garbage removal activities in Tsavo National Park and Nairobi National Park.
- Exchanging experience on environmental protection: We attended the international symposium on South-South Cooperation for Ecological Civilization jointly organized by the United Nations Environmental Program, the Chinese Academy of International Trade and Economic Cooperation of the Ministry of Commerce and other related organizations to share and exchange experiences in environmental protection.



## 用行动倡导环保

我们倡导绿色生活理念,推动绿色运营,努力降低自身消耗对环境的影响,打造 低碳生活。我们提高环保意识,积极参与当地各类环保公益活动,主动承担环保 责任,助力生态文明建设。

- **倡导绿色办公**:推广使用节能环保型办公材料和再生材料,加大节能建筑材料的采购力度,加强公务车辆用油定额管理和考核。
- ◆ **提高环保意识**: 项目部定期邀请野生动物保护专家或动物保护组织到营地和现场进行野生动物保护宣传。
- ◆ **参与环保公益活动**:赞助并参与察沃公园以及内罗毕公园的垃圾清理活动。
- ◆ **环保经验交流分享**: 出席联合国环境规划署和中国商务部国际贸易经济合作研究院等联合举办的"生态文明与南南合作"国际研讨会,交流、分享环保实践经验。

## Setting up a responsible image by rescuing a trapped wild elephant 援救被困野象,彰显良好履责形象

On February 10, 2016, the SGR Phase 1 project received a request from an official of Kenya Wildlife Service, hoping that the project department could help rescue an adult wild elephant that accidentally fell into a puddle. After the project department received the request, it immediately sent a rescue team to the scene and carried out an effective rescue plan. After five hours of emergency rescue, the wild elephant finally got out of danger.

2016年2月10日,蒙内铁路项目收到肯尼亚野生动物管理局长官的求助,希望项目部能够帮助营救一头不慎掉进水坑的成年野生大象。项目部了解情况后,立即派救援小组赶往现场,确定行之有效的救援方案,经过5个小时的紧急营救,终于帮助野象脱险。



Using mechanical equipment to rescue the trapped elephant 调用机械设备援救受困大象



"知行合一,止于至善"。在肯尼亚经营的 30余年,我们早已与这片非洲大地紧密相 融,与当地员工、社区居民、政府形成共生 共荣的命运共同体。在推进经济合作和促进 事业发展的同时,我们尊重维护员工切身利 益、支持社区民生改善,努力让社区更美 丽、生活更美好。

## **Diversified Work Environment**

We respect diversity and value inclusiveness. By establishing a work environment with mutual support, we created a broad career development platform for employees that increased employees' confidence, pride and happiness.

## Mutual Respect

Paying special attention to communication and interaction between Chinese and Kenyan employees, we fostered mutual respect of the two sides. Chinese employees actively learned local languages, cultures, customs and traditions, while Kenyan employees learned about the history, culture and management methods of China. Starting as working partners, they became real friends that jointly built the big family of CRBC.



## 多元的工作环境

我们尊重多元,重视包容,建立相互扶持的工作环境,为员工打造广阔的职业发展平台,提升员工自信心、自豪感和幸福感。

### 相互尊重

我们注重双方员工的沟通互动,培养相互之间的尊重意识,中方员工主动学习当地语言、文化、习俗和传统,肯方员工了解中国历史文化和管理方式,从工作上的伙伴变成生活上的朋友,共同建设中国路桥大家庭。

- Respecting the basic rights and interests of local employees
- Respecting the customs, cultures, languages, traditions and laws of local employees
- Respecting the local employees' aspiration for skill improvement and career development
- Respecting local employees' expectations and demands
- ◆ 尊重当地员工的基本权益
- ◆ 尊重当地员工的习俗、文化、语言、传统和法律
- ◆ 尊重当地员工技能提升和职业发展的愿望
- ◆ 合理对待当地员工提出的期望和诉求

- Strengthening interaction with each other to learn about the characteristics of different cultures and enhance understanding
- Strengthening cultural communication by inviting local employees to celebrate traditional Chinese festivals together, and participating in the celebration of local festivals to enhance language learning and unblock the channel for communication
- ◆ 加强互动交流,了解彼此文化特点,增进理解
- ◆ 加强文化方面的沟通互动,邀请当地员工参与 中国传统节日,参与当地节日活动,加强语言 学习,畅通沟通渠道

## CRBC brings me the love of my life 中国路桥为我带来此生的幸福

Working at CRBC has brought me such great luck in the 17 years I have been employed there. My husband and I are both employees of CRBC and we are very grateful for CRBC to offer us the jobs and the opportunity to continue our study and broaden our horizon in many ways. Today, we have not only realized career development, but also created a happy marriage. Our two bright and lovely children have made me content. CRBC is not only transforming Kenya's roads, but also my life.

Delilah Wendy Aminilwa, a Kenyan employee of CRBC

能在中国路桥工作,对我来说是幸运的。我在路桥工作已有17年了,路桥对我的最大意义是它做了我的媒人,让我遇到了爱情。我的丈夫也是路桥的一名员工,我们都非常感谢路桥带给我们的工作机会,让我们不断学习和深造,从多方面开拓我们的视野。如今,我们不但事业有所发展,婚姻也都很幸福美满,两个聪明活泼的孩子让我对自己的人生非常满意。中国路桥公司改造着肯尼亚的公路,也改变着我的人生。

——中国路桥公司肯尼亚籍员工 Delilah Wendy Aminilwa

## **Employee Care**

We care about our employees and provide them with a people-oriented work and living environment. We provide local employees with space and facilities for recreational activities, and provide places for relaxation and communication during spare time. We set up a contingency fund for employees in difficulties, and have established a medical fund for local employees to assume some of their medical expenses.

### 员工关爱

我们建设活动场地和娱乐设施,提供业余放松和交流的场所,为员工提供人性化工作环境。我们为困 难员工设立应急基金,为当地员工建立医疗基金,用心关爱员工生活。

### AIDS prevention with love – Publicity on knowledge about AIDS prevention and cure "以爱防艾"——为员工普及艾滋病防治知识

In 2013, the Nairobi Southern Bypass project department held a series of public lectures on the "CRBC AIDS Awareness Day". It specially invited professors from international professional health care institutions to teach theoretical knowledge on the pathology, hazards and preventive measures of AIDS. Around 100 local employees took part in the lectures, who later disseminated AIDS prevention knowledge among other employees to deepen their understanding of AIDS and the knowledge about AIDS prevention.

2013年,内罗毕南环城路项目部举行了多次"中国路桥艾滋病宣传活动日"专题公益讲座,特邀国 际专业卫生保健机构的教授,针对艾滋病的病理、危害、预防措施等方面进行了理论知识的宣传讲解。 近百名当地雇员代表参与了此次讲座,并由他们向其他员工宣传和普及艾滋病防治知识,促进了员 工对艾滋病的深入了解和对防治知识的掌握。

### Kenya-China Friendship Street – A garden of love on the grassland of the African continent "肯中友谊街"成为非洲草原上的爱心家园

Section 8 of the SGR Phase 1 is set in both cities. During the construction of the camp, the periphery was all covered with weeds. Although the local staff could receive meal supplements every day, there was no suitable place to dine and no affordable and tasty food to buy. After the completion of the camp, the project department decided to build a restaurant street for the local staff. With compliance of laws and regulations, families of local employees could shop on the street without additional costs. Kenya-China Friendship Street has become a new hope for families of Kenyan employees.

蒙内铁路第八标段跨越内罗毕和蒙巴萨两个地区,在营地建设期间,营地周围都是荒草,当地员工虽然 每天都能拿到餐补,但没有合适的用餐地点,也没有便宜实惠的东西可吃。营地落成后,项目部决定 为当地员工建一条吃饭的街,只要守法经营,当地员工家庭就可以无偿使用街上的店铺。肯中友谊街 成为肯尼亚员工家庭新希望。





### Jaclyn realized the dream to go to university 杰克琳实现大学梦

Jaclyn was a Kenyan lab technician in the operation workshop of the Maintenance Division under the Operation & Maintenance Department of the Operation Company of the SGR Phase 1. On October 18, 2017, Jaclyn received an offer from the graduate department of the University of Siena, Italy, but the tuition fee was an astronomical figure for her. After hearing this news, Jaclyn's supervisor in the lab funded the tuition fee for her as a strong support for her to go to university. At the same time, other Chinese employees in the workshop also generously made donations to help her realize the dream to go to university.

杰克琳是蒙内铁路运营公司运维项目部机务部运用车间的一名肯尼亚化验员,今年 10 月 18 日,杰克琳接到意大利锡耶纳大学研究生的录取通知书,高额的留学费用对于她 来说是一笔天文数字。杰克琳的化验员导师知这个消息后,资助美金,坚决支持杰克 琳去大胆实现她的求学理想。与此同时,车间的其他中国员工也纷纷慷慨解囊,帮助 这名肯尼亚员工实现大学梦。

## **Communication with the Community**





## 社区沟通

我们建立沟通对话机制,主动与肯尼亚办事处承建的各项目相关地方政府、社区 和部族沟通,识别项目决策、运营对社区的影响。同时,主动了解并尽力满足当 地社区的期望和诉求,推动建立良好的社区关系。

### **Advanced communication with** communities 与社区提前沟通

The project team in Kenya Offices actively launched liaison and interviews to learn about the social demands of the local community.

肯尼亚办事处所属各项目在建设期间 主动开展联络和访谈,了解项目所在 地的社会需求。

### **Visiting local community** 拜访当地部族

The project team in Kenya Offices would arrange project members to visit residents of local communities and elders of local tribes to boost the relationship with local communities.

肯尼亚办事处所属各项目都会安排 项目成员拜访当地社区民众和当地 部落长老,促进与当地社区之间友 好关系建立。

Communication activities launched by CRBC 开展社区沟通活动

### **Visiting local schools** 走进当地学校

The project team in Kenya Offices would visit local schools and provide them with school supplies and daily necessities according to their actual

肯尼亚办事处所属各项目结合当地需 求,因地制宜组织员工探望当地社区 小学,为他们送上学习用品、生活物 资等。



Local residents taking a ride on Madaraka Express 组织当地社区乘坐蒙内铁路



Local residents participating in the functions organized by 邀请社区居民参加活动



## **Supporting Education Development**

Many of the schools that have received our assistance are gradually becomin better equipped. More kids now are studying in the spacious and bright classrooms, and get the opportunity to change their life.

We raised funds and built classrooms for schools in slums to create a better learning environment for students, donated funds for children from poor families to have a chance at education, financed outstanding graduates to study abroad, and cultivated top talents for the operations of the East Africa Railway.



## 支持教育

我们援助过的许多学校,更多的孩子得以进入宽敞明亮的教室接受教育,享有知识改变命运的机会。

我们筹资为贫民窟的学校修建教室,改善了孩子们的学习环境;捐资助学,为贫困家庭的孩子们提供受教育的机会;资助优秀毕业生出国交流学习,为肯尼亚以及东非铁路网的运营输送高端人才。



### Bringing hope to the slum 贫民窟里的希望

In 2007, Chinese Embassy in Kenya assisted the construction of MCEDO Beijing School in the slum of Mathare. The school was designed to accommodate 250 students, but as the number of students kept increasing, the school was too small to accommodate all students. In 2012, we led 16 Chinese companies companies to raise RMB 4 million ( equivalent to KES 5.91 billion ) as the fund for expansion of the MCEDO Beijing school to make it big enough to enroll more students.

2007年,中国驻肯尼亚大使馆在 Mathare 贫民窟内援建了 MCEDO 北京学校,当时规划可容纳 250 名学生上课,但学生 数不断增长,远远超出容纳范围。2012年,我们牵头 16家中 资企业筹资 400 万人民币, 扩建 MCEDO "北京学校", 满足 更多学生接受教育。

At the same time, we actively participated in donating activities for MCEDO Beijing School, through which we bought sportswear, footballs, stationery and other items .We also donated living commodities to Kibera Hope Academy in Kibera slum, bringing them hope and contributing to education development in Kenya.

同时,我们积极参与 MCEDO 北京小学捐助活动,数次为学生 购买球衣、足球、文具等物品,把关爱送到每一个学生手中。 我们还对基贝拉贫民窟的希望小学(Kibera Hope Academy) 捐赠物资,尽最大可能为贫民窟带去希望,为肯尼亚教育事 业发展做出积极贡献。





### Creating a better future with love 爱心绘就美好明天

**Principal of Emali Public Elementary School** 

——埃马丽公立小学校长

## **Improving People's Livelihood**

We followed the basic guideline of "seeking for common interests based on the main business" and "winning the support or locals by considering local demands", and actively organized employees of the project to carry out support activities in the surrounding communities. By doing this, we took the lead to build a closer relationship with local communities, enhance the livelihood of local residents, and drive the sustainable development of the community.

- Providing water resources: We expanded reservoirs of local communities to provide enough drinking water for cattle and sheep during the dry season, and donated drinking water to surrounding communities to solve the problem of lack of water.
- Building roads and bridges: We improved roads and built houses for local villagers to provide convenience for the transportation and life of local residents.
- **Disaster relief and rescue:** In face of a series of major natural disasters, we actively participated in disaster reliefs, material donations and road repairs, and did everything possible to reduce the losses caused by natural disasters to local residents.

## Naivasha Water Project solves the water supply problem along the project 纳瓦沙饮水工程为沿线居民解决用水难题

In order to guarantee sufficient water supply for the project, SGR Phase 2A initiated the Naivasha Water Project to set up water points and towers along the project and transmit water from Naivasha Lake to local residents for their daily use (non-drinking) and livestock drinking water.

After the water tower was built in INKORIENITO Village, the daily water supply volume for local residents was about 140 m<sup>3</sup>, effectively helping the water supply for about 3,000 residents from 1,200 households and for about 10,000 farm animals.

为保障项目用水,内马铁路项目部启动内瓦纱湖取水工程,取水工程沿线设置取水点,建设水塔,为当地居民日常生活(非饮用水)、牲畜饮用提供水源。

其中,水塔建在INKORIENITO村,建成后,平均每天可为当地居民提供的水量约为140立方,可有效缓解INKORIENITO村1,200户人家约3,000居民,以及约10,000头牲畜的用水问题。



## 改善民生

我们遵循"结合自身主业,寻求利益契合点""结合当地需求,争取民众支持"的基本策划方针,积极组织项目员工在周边社区开展帮扶活动,主动拉近与当地社区的关系,提升当地居民福祉,促进社区的可持续发展。

- ◆提供水源: 扩建当地社区蓄水池,解决旱季社区牛羊的饮水问题;定期向周边社区捐赠饮用水,解决社区用水匮乏问题。
- ◆修路建桥:为项目所在地村民改善道路、修建房屋,无偿为当地社区居民的出行和生活提供便利。
- ◆ **救灾救援**: 在一系列重大自然灾害面前挺身而出,积极参与灾害救助、物资捐赠和道路抢修工作,竭尽所能减轻自然灾害对当地居民造成的损失。

### Building roads for the slum of Kibera 为贫民窟修建道路

The Nairobi Southern Bypass passes through the slum of Kibera, where the roads were too severely damaged for the passage of vehicles. The project department designed and constructed a 500-meter-long, 6-meter-wide high-grade service road free of charge, which solved the traffic problem of most parts of the slum.

内罗毕南环城路项目穿过基贝拉贫民窟,贫民窟内部道路 已严重破损,尤其雨天时,道路根本无法通行。项目部为 基贝拉贫民窟免费设计、修建了一条 500 米长、6 米宽的 高等级服务路,解决了大部分区域内居民的出行问题。

## Pioneering in disaster reliefs with deep care for victims 心系灾民,勇担救援的排头兵

In early 2011, Kenya was hit by the worst drought in nearly sixty years. CRBC organized the disaster relief activity themed "Disaster Relief Operations of Chinese Enterprises and Chinese People in Kenya" with detailed implementation plans for coordination. A total of KES 25.6 million (approximately RMB 1.81 million) was donated for the relief effort during the activity. Some donations were used to purchase 60 tons of corn flour and 5 tons of red beans, and 12 trucks and 8 service vehicles were sent to the worst-hit areas, effectively relieving the pressure of high demand on materials after the disaster.

2011 年年初,肯尼亚遭受了近六十年来最严重的旱灾。中国路桥积极组织"肯尼亚中国企业及华人华侨赈灾行"活动,制定活动执行方案并进行组织协调。此次活动共募集捐款 2,560 万肯先令(约 181 万人民币),部分捐款购买了 60 吨玉米粉及 5 吨红豆,并组织 12 辆大车、8 辆服务车辆送往受灾最严重的地区,有效缓解了灾后的物资需求压力。









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