



WINNING  
CONSORTIUM  
SIMANDOU



# Summary Report of Actions in Reply to

IUCN SSC PSG SGA ARRC Task Force report

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## Acronyms:

AGEE: Agence d'évaluation environnemental

ARRC: IUCN SSC PSG SGA ARRC Task Force

CTG: LA COMPAGNIE DU TRANSGUINÉEN S.A

MEDD: Ministère de l'Environnement et du Développement Durable / Ministry of Environment and Sustainable Development

OGPNRF: Office Guinéen des Parcs Nationaux et Réserves de Faune / Guinean Office of National Parks and Wildlife Reserves

PNPSS: Pinselli-Soyah-Sabouya National Park

RTS: Rio Tinto Simfer

WCS: Winning Consortium Simandou

WCSR: Winning Consortium Simandou Railway

WCSP: Winning Consortium Simandou Port

WCSM: Winning Consortium Simandou Mine

WCF: Wild Chimpanzee Foundation

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# 1. Context

## 1.1. Project background

For the development of the Simandou iron ore project, Winning Consortium Simandou (WCS) as the holder of mining concession Blocks #1 & #2, started to develop the 552.48km long Simandou railway from the Morebaya (Senguelen) port area in the west to the Simandou mine area in southeast Guinea. The railway includes 11 stations, 4 tunnels, 206 bridges, as well as other railway facilities such as 11 small power stations, signaling and ventilation of the tunnels, general cargo unloading tracks, workshops and accommodation. At the port area, it includes the unloading loop and car dumpers; in the mine area, facilities include the rapid quantitative loading system and fuel unloading tracks.

In July 2022, following the establishment of CTG, it has been agreed between WCS, Rio Tinto Simfer and the Government of Guinea to co-develop the infrastructures for the Simandou project. Simfer will construct a spurline to connect Simandou Blocks #3 & #4 to the railway mainline, and a Simfer port adjacent to WCS port in Morebaya (Senguelen).

All facilities will be built within Guinea, with the construction planned from 2023 to 2025, and the operation commissioning in 2026.

## 1.2. Our approach to managing our impacts

WCS fully acknowledges the critical importance of enhancing the assessment, monitoring and management of the environmental and socio-economic impacts of the project. It is managed by our Environmental and Social Management Plan (ESMP). A component of this ESMP is our Biodiversity Action Plan (BAP), which maps out the biodiversity protection measures according to the mitigation hierarchy (Avoid, Reduce, Restore, Offset) for all phases of the railway project according to the IFC Performance Standard 6. Under the BAP, a series of management plans are being developed to manage different aspects of biodiversity protection, such as the Biodiversity Management Plan ((construction phase) which is already developed and currently being implemented), Biodiversity Management Plan (operations phase), Biodiversity Monitoring and Evaluation Plan, and Biodiversity Offsets Management Plan (which is being worked out on a collaborative approach with RTS).

One of the measures of our BAP is the involvement of stakeholders and experts and it was in this context that the ARRC was invited to observe the mitigation measures that had been put in place / had been proposed and to make recommendations to reduce the project's impacts. It is part of our continuous improvement approach, with which we implement a PDCA (plan-do-check-act)<sup>1</sup> procedure across our processes and aim to maximize the project's benefits for the local population and biodiversity preservation. The visit went successfully in March 2023 with appreciation to the ARRC delegation, and WCS received the visit report from ARRC on 27th July 2023.

WCSR views the recommendations provided by the ARRC as valuable inputs. These recommendations support the company in enhancing its sustainability policy to ensure compliance with Guinean regulations, alignment with international best practices, and mitigation of risks associated with the project.

In this regard, this report aims to provide a summary of updates on the actions that have been taken to address the ARRC's recommendations, and mitigation measures being implemented. It focuses on measures that are being implemented currently by WCSR in accordance with the Biodiversity Management Plan (construction phase) for the rail, although the recommendations were raised during the visit to the future PNPSS. This Plan focuses on the implementation and monitoring of "Avoid" and "Reduce" measures to address impacts associated with rail construction work such as habitat fragmentation, hydrological impacts and risks of zoonotic disease transmission.

<sup>1</sup> Plan, Do, Check, Act (PDCA) is a four-stage cycle that you can use to continuously improve your business. It is an integral part of Lean Management. PDCA aims to improve business processes; this is done by planning and introducing solutions, testing them, and analyzing the results.

## 2. Actions we have taken

Since the construction of the railway project, major works have been conducted to address impacts which have been monitored, with a strong focus on environmental protection. Comprehensive management plans have been implemented to minimize disturbance on the wildlife. This has resulted in a significant increase in investment, such as additional US\$30 million to construct the Soyah Tunnel to avoid cutting through the Pinselli classified forest, an additional US\$200 million investment to add 69 large bridges, 25 eco-flyovers and enlarge 262 culverts as animal passages, resulting in a total of 206 bridges with a total length of 79.95km along the railway. This brings significant faunal connectivity to the railway corridor. Pre-construction biodiversity surveys identified and marked 588 trees crucial for chimpanzees and 2319 trees important for other species and ecological functions, with ongoing efforts to raise awareness about tree protection in communities through a structured program developed by WCS. Progressive rehabilitations in collaboration with local communities and NGOs have started with 42 sites restored to date. An influx management plan has also been developed and implemented in coordination with local authorities.

A strong focus was placed on implementing a safeguarding policy for chimpanzees in the area of impact of the project, to protect their natural environment, monitor their presence and activities on-site, and raise awareness among employees and local communities. A survey of chimpanzee population and density along the entire railway line was completed in January 2024 and is now in the final stages of data analysis. Results from this survey will guide the development of the Chimpanzee Monitoring and Evaluation Plan, which is a component of the Biodiversity Monitoring and Evaluation Plan mentioned above. Regarding mitigation measures, in addition to building animal passages and protecting trees, several other key measures were implemented. A wildlife incident registry has been introduced to document any injuries, near misses, or observations involving chimpanzees. Since January 2023, a Biodiversity Code of Conduct has been enforced, prohibiting workers and contractors from consuming, transporting, or purchasing bushmeat, as well as hunting and keeping wild animals. Sensitization efforts in communities and migrant settlements are conducted by WCSR community and biodiversity agents to raise awareness about specific tree protection, with plans to further develop a sensitization program in collaboration with local NGOs. In 2024, a training plan has been devised to provide biodiversity conservation awareness training for all local staff, focusing on chimpanzee-related laws, behaviour, and appropriate responses when encountering chimpanzees, with training started in March 2024.

Section 2.1 is a summary of the key aspects raised in the ARRC visit report followed by detailed answers (Annex 1) for each recommendation for the mitigation of direct and indirect impacts of the project.

### 2.1. Summary of the key aspects highlighted in the report transmitted to WCS in July 2023

This section is a summary of the mitigation measures implemented for the key aspects raised by the ARRC. More information about these measures, as well as all other measures not mentioned in this summary, are listed in Annex 1.

#### - Progressive rehabilitation

A community-centred approach was adopted to carry out restoration/rehabilitation work. Three Guinean NGOs with experience in nursery management were hired to recruit interested members from communities along the railway and mine to form and train thirteen (13) conservation groups. Each group would be responsible for the operations of a nursery, as well as helping to restore and maintain (at least for three years) rehabilitation sites which include unused access roads, roadsides, borrow pits and dump sites. Management of the nurseries was handed over from the three NGOs to the community conservation groups in mid-2023. Restoration also started in 2023 despite several challenges such as the nurseries being only able to deliver saplings towards the end of the rainy season. Forty-two sites of about 100.48 ha with 194,315 plants were restored. More info of our 2023 restoration efforts can be found in measures 1.2, 3.2 and 4.3 of Annex 1. We envision the first few years of restoration to

be a period of trials and experimentation to determine the most effective methods, including natural regeneration, with inputs from international restoration experts. We also expect the first few years of restoration to be a period of providing intensive support to the community conservation groups to develop their agency and capacity, e.g. planning and managing operations budget, processing financial transactions etc. The scale of restoration is expected to increase significantly towards the end of 2025 when construction work is targeted to be completed.

### **- Induced migration management**

An influx management plan is already developed and being implemented. Key measures have been emphasized and implemented such as the monitoring of in-migrant numbers, the establishment of appropriate recruitment procedures in collaboration with local authorities, e.g. not recruiting in our project area to discourage job seekers from settling around project camps etc. Further external support including engagement with NGOs for awareness raising and census building are being explored for better management of the influx of migrants.

WCS urges the contractors to build sufficient camps to accommodate their skilled workers, and provide commuting to their daily workers between their home and the project. A number of 'hotspots' of in-migration settlements have been identified, such as the settlement of in-migrants near the Section 5 main camp. A temporary living base has been built which has 240 rooms to accommodate about 600 workers. WCS is in the process of cooperating with local authorities to move the in-migrants into the temporary camp, therefore removing the settlement of the in-migrants. More temporary living bases will be built for workers who still need to live near the project sites.

### **- Protection of critical flora species**

As part of the pre-construction biodiversity surveys conducted by our biodiversity and environmental agents, trees and sensitive areas are marked and tagged in the field for protection and avoidance. Up till May 2024, 588 trees that are important to chimpanzees were marked to be preserved and recorded in the WCS biodiversity database. Refer to measure 10.1 of Annex 1 for the list of species. In addition, 2,319 trees that are important for other species and ecological functions were also marked and preserved. The WCSR community relations and environmental agents have also been raising awareness about the protection of trees in communities and in-migrant settlements since late 2023. A more structured awareness-raising programme, comprising various topics such as bushmeat hunting, fire management etc., is being developed and will be subcontracted to local NGOs where necessary.

### **- Animal passages**

Animal passages for the rail were reviewed and validated by Artelia and Biotope, as well as other international experts. Significant efforts were spent on the design optimisation of the faunal crossings, such as following the design criteria of having an openness ratio of at least 1.5, and intervals between faunal crossings being not more than 500m in critical habitats, no more than 1,500m in natural habitats and no more than 3,000m in modified habitats. Where the underpasses are not applicable due to topographic constraints, eco flyovers and traffic flyovers are considered. The design of the railway animal passages was finalised in 2023 and their construction began in 2023. Sixty-nine(69) large bridges or box bridges were added, and 25 eco-flyover bridges were added whilst 262 culverts were enlarged during the various discussions between the designing firm and Artelia, resulting in an additional capital investment of more than 200 million USD. In addition, a preliminary list of animal passages for the main access road within the future Pinselli-Soyah-Sabouyah National Park was established with WCF, with special attention paid to chimpanzees, elephants and connectivity of sensitive habitats such as gallery forests. This list of animal passages for the main access road is currently being reviewed following advice from international experts, including the recommendation that the main access road within the future PNPSS will be closed after construction. Refer to measure 1.8 of Annex 1 for more information.

### **- Bush fire management**

Bush fire management starts from within the camps and construction sites to prevent fires from spreading to the surrounding environment. Ashtrays are provided within rest areas and designated

production areas in the camps of the various sections. In construction sites in protected areas, smoking is prohibited. In addition, fire-fighting equipment is placed near generators, electric machinery and other equipment with high risk of fire. Fire breaks are also placed around the perimeter of camps. Refer to measures 5.5 and 5.6 of Annex 1 for more information.

In addition, control posts to regulate the usage of the access roads are being implemented in PNPSS in collaboration with OGPNR (6 checkpoints), see measure 8.1 of Annex 1. As part of their responsibilities, they will proceed with control and awareness-raising patrols, which include fire prevention along the access road and communities' roads. To cover the rest of the PNPSS beyond the access roads, a PNPSS surveillance program is being implemented with WCF which includes community Ecoguards patrolling the PNPSS and doing bush fire prevention and awareness-raising, see measure 11.2 of Annex 1. A more specific bush fire management plan will be included in the biodiversity management plan of the PNPSS.

Information about other measures such as those related to traffic management (measures 1.5, 1.6, and 1.7), sedimentation and erosion control (measures 2.1, 2.2, 3.1 and 3.2), disease control (measures 7 and 12) etc. are outlined in Annex 1. In general, the measures described in this report are guided by our management plans as described in Section 1.2. Recent actions to ensure the effective implementation of these measures, for example, include comprehensive HSE education and training programmes conducted by the WCSR HSE department for the various subcontractors along the entire railway line. The HSE management of the various subcontractors was trained as trainers, who will subsequently train their respective workers. Training topics include wildlife preservation, biodiversity conservation and environmental protection. From 1 March to 1 April 2024, 13 training sessions were conducted for the various subcontractors along the railway, with the number of trainees reaching 200. Such training will be repeated periodically.

Whilst continuous mitigation efforts are being made despite the challenges of a tight project schedule and other constraints, WCS remains determined to collaborate closely with its industrial partners as well as various stakeholders to strive for no net loss in natural habitats and net gain in critical habitats.

## **Annex 1 – Detailed migration measures reflecting ARRC's recommendations**

## **Annex 2 – Illustrations of some mitigation measures**

## Annex 1 - Detailed migration measures reflecting ARRC's recommendations

### Direct impacts

This table presents the progress of the implementation of the mitigation measures for the direct impacts of the project.

ARRC Recommendations	Status of implementation	Target completion date	Responsibility	Implementation result	Comment
<b>Direct impacts</b>					
<b>1. Habitat loss &amp; fragmentation associated with access roads and railway</b>					
<p>1.1 Restrict road width and Right of Way to a minimum during design and construction and re-adjust the width of already constructed roads.</p> <p>1.2 Immediately rehabilitate all access roads that have been abandoned or that will not be used for maintenance and operational purposes once usage is completed.</p>	<p>All clearance was conducted as per design.</p> <p>Unused roads will be included in the restoration program.</p> <p>Access roads within the PNPSS will be closed/access restricted after construction.</p>	<p>Applies for the whole construction period for rehabilitation.</p> <p>The road will be closed/access restricted after construction.</p> <p>Restoration of identified unused roads is expected to commence in the rainy season of 2024.</p>	<p>WCS biodiversity team to mark the sites.</p> <p>WCSR to execute the work.</p>	<p>Natural regeneration procedure is being developed along with the revegetation procedure.</p> <p>In 2023, a revegetation pilot project was initiated, and learnings will be applied for the 2024 revegetation program to be initiated before the rainy season.</p> <p>A list of priority sites to be restored has been established in collaboration with WCF and the engineer's team and will be included in the 2024 restoration program. A total of 16 sites were identified for restoration and 9 of them are unused access roads that will be restored.</p> <p>WCSR has identified 178 sites of approximately 9.18 km<sup>2</sup> in total along access roads and railways for restoration in 2024. Restoration sites for subsequent years are still being identified.</p>	<p>Before restoration begins at a site, the biodiversity team and WCSR representatives will sign a form to agree that the site is handed over to the biodiversity team for restoration. This process removes the land clearance permit and secures the restoration effort.</p>
<p>1.3 Avoid alignment of any future access roads within or close to gallery forests, forest patches or areas exhibiting signs of chimpanzee usage.</p>	<p>In progress</p>	<p>Applies for the whole construction period.</p>	<p>WCSR HSE team and WCS biodiversity team.</p>	<p>The biodiversity team has implemented a formal land clearance process and is working closely with the WCSR engineering department. All new disturbance area is assessed against a list of criteria applying mitigation hierarchy, such as avoiding gallery forests.</p>	
<p>1.4 Avoid placing construction debris around large trees.</p>	<p>Completed for existing sites.</p> <p>Instructions were provided to WCSR for future sites.</p>	<p>Applies for the whole construction period.</p>	<p>WCSR HSE team and WCS biodiversity team.</p>	<p>Construction debris has been removed from large trees. The HSE team of the WCSR has informed all subcontractors not to damage tree roots by placing heavy materials near trees.</p>	<p>All sub-contractors were informed of these instructions by WCSR.</p>

<p>1.5 Reinforce traffic and speed limit controls, e.g. equip all vehicles with digital tachographs and drivers with cards which can be blocked after a set number of infractions to facilitate monitoring and sanction implementation.</p>	<p>In progress</p>	<p>Applies for the whole construction period and operations.</p>	<p>WCSR</p>	<p>Approximately 1200 digital tachographs supported by a backend database/server (i.e. an In-Vehicle Monitoring System) to monitor in real-time vehicle speeds have been procured. They have been tested and installed in all long-distance transport vehicles since March 2024 .</p> <p>A policy has been in place since April 2023 to strengthen management of traffic safety, in which control of traffic speed features prominently (heavy vehicles 40km/h, light vehicles 60km/h). This is part of a transport management plan. Every incident of speed violation will incur a fine of US\$500. If traffic incidents are not reported via the incident reporting mechanism, there will be a fine of US\$2000. Serious traffic incidents will be assessed and investigated on a case-by-case basis, and if necessary, the culpable driver will be blacklisted and never to be employed by WCSR.</p> <p>As of April 2024, 1782 large vehicle drivers and 327 small vehicle drivers have been trained in defensive driver training. Training content includes:</p> <p>hazard perception and anticipatory driving, distance management, emphasizing maintaining a safe distance, speed management, intersection safety, avoidance techniques, and emergency situation management.</p> <p>A total of 703 speed bumps, 840 traffic signs and 820 biodiversity signs have been installed along the entire route. 252 speed bumps, 359 traffic signs and 290 biodiversity signs have been set up in the protected areas of the PNPSS.</p> <p>Speed checks are conducted from time to time on the construction right-of-way and in the protected areas, and speeding behaviour will be penalised with USD 500 per time.</p>	<p>Separately, a wildlife incident registry to record any injuries, near misses or observations of chimpanzees was also set up. To date, no traffic incidents involving chimpanzees were recorded.</p>
<p>1.6 Set clear time windows when no traffic is permitted (e.g. night time) except in cases of emergency (predictability helps facilitate movement of wildlife and chimpanzees).</p>	<p>Implemented.</p>	<p>Applies for the whole construction period and operations.</p>	<p>WCSR</p>	<p>All long-distance transportation vehicles are prohibited from 7pm to 6am the next day along the entire access road, but there are some light vehicles driving at night where there are active construction areas at night. There are also some mixing cement trucks driving at night to supply active construction sites. However, the active construction sites are very limited at nighttime in each section and traffic is limited to within the section, no traffic is allowed at night between the various sections. Normally the active construction sites take about one to three months to complete and shift to other sites.</p>	

<p>1.7 Avoid/reduce any unnecessary traffic during construction and operation.</p>	<p>In progress</p>	<p>Applies for the whole construction period and operations.</p>	<p>WCSR</p>	<p>Except for transport vehicles supporting construction within the PNPSS region, WCSR is implementing a policy to divert all heavy vehicle traffic away from the PNPSS region to the national highway network.</p>	<p>WCSR has put in place an application process and registry to approve and document exceptions for heavy vehicles to use access roads within the PNPSS region.</p>
<p>1.8 Adequate placement of underpasses (sufficiently high and wide for passage of elephants too, to be determined by specialist studies) over rail and maintenance roads.</p>	<p>In progress</p>	<p>Applies for the whole construction period.</p>	<p>WCSR HSE team, WCS biodiversity team and consultants.</p>	<p>Abundant animal passages on the railway line have been designed, with inputs from Artelia and Biotope. Significant efforts were spent for the design optimisation of the faunal crossings, such as following the design criteria of having an openness ratio of at least 1.5, and intervals between faunal crossings being not more than 500m in critical habitats. The design of the railway animal passages was finalised in 2023 and their construction began in 2023. Sixty-nine large bridges or box bridges were added, 25 eco-flyovers were added whilst 262 culverts were enlarged during the various discussions between the designing firm and Artelia, resulting in an additional capital investment of more than 200 million USD.</p> <p>In total, there are 206 bridges, 25 eco-flyovers and 46 overpasses (in the form of girder bridges). The length of the access ramps to the overpasses will be determined by local topographical conditions. A total of 1182 culverts, with an average interval of two culverts per kilometre, will be distributed along the entire railway line:</p> <ul style="list-style-type: none"> <li>• 487 that are &lt; 3 m ;</li> <li>• 471 that are from 3 to 5 m ;</li> <li>• 224 that are &gt; 5 m.</li> </ul> <p>In summary, together with the 206 bridges, 380 crossings are optimised to become faunal crossings (widening, height increase, overpass, side bench) to reduce the project's impact on ecological continuity.</p> <p>Subsequently, WCF and elephant specialists from the IUCN Asian Elephant Specialist Group have been invited to the field to discuss suitable animal passages for the main access road within the future PNPSS. The animal passages for the main access road will focus on reconnecting gallery forests since the main access road is intended to be closed/access-restricted after construction.</p>	<p>See Annex 2 for photos of culverts, eco-flyover and bridge.</p> <p>The effectiveness of the animal passages will be monitored as part of the BMEP. Corrective actions will be applied depending on the results.</p> <p>Dedicated species management plans are being developed with special mitigation measures (salty marsh and fruit trees to attract elephants at dedicated passages, etc.).</p>

<b>2. Impact on water resources: Sedimentation and blockage of waterways</b>					
2.1 Deploy measures to reduce sedimentation across all impacted waterways.	In progress	Applies for the whole construction period.	WCSR HSE team	<p>Anti-erosion protective measures such as stone masonry, revegetation etc. are used at culvert openings and on both sides of river embankments by the various sections along the whole railway at approximately 600+ sites.</p> <p>Three-stage sedimentation tanks are set up in areas where effluent is discharged, such as mixing stations, tunnel entrances and exits, tunnel inclined shafts and vertical shafts, (a total of 17 sites).</p>	See Annex 2 for photos of stone masonry and three-stage sedimentation tank.
2.2 Implement appropriate engineering measures (culverts sufficiently large etc.) to ensure continued water flow across both permanent and temporary waterways (these need to be mapped appropriately during rainy and dry seasons if not completed yet).	In progress	Applies for the whole construction period.	WCSR HSE team and WCS biodiversity team	<p>To ensure hydrological continuity, 1182 culverts and 206 bridges are being built along the railway line. Numerous bridges and culverts, as well as other structures such as gutters, have also been built along the access road. For example, within the future PNPSS, 305 culverts and gutters have been built along the main access road. The openings of the culverts have been reinforced to prevent erosion.</p> <p>For the access road, culverts and bridges were reviewed by the designing firm and WCF and the list is being reviewed to incorporate the input from the elephant experts.</p>	
<b>3. Erosion along roadsides</b>					
3.1 Implement erosion reduction measures, e.g. netting or other measures to prevent rock falls and landslides in steep areas (urgently needed prior to the rainy season).	In progress	Applies for the whole construction period and operations.	WCSR	<p>At locations with increased risk of erosion, the access road has been reinforced with a concrete surface.</p> <p>Throughout the line, 417 places were hardened with concrete at gutters, mountain roads and steep slopes. 92200 m<sup>2</sup> of slopes and embankments have been restored.</p> <p>WCSR has also identified 299 sites of approximately 6.21 km<sup>2</sup> in total for hydroseeding up till mid-2025. Hydroseeding sites for subsequent years are still being identified.</p>	<p>See Annex 2 for photo on erosion prevention measures at tunnel entrance.</p> <p>The species of plants to be used for hydroseeding in 2024 are still being finalised.</p>
3.2 Rehabilitate all roadsides whether temporary or permanent to reduce risk of erosion.	In progress	Applies for the whole construction period and operations.	WCSR	WCSR has identified 178 sites of approximately 9.18 km <sup>2</sup> in total along access roads and railways for restoration in 2024. Restoration sites for subsequent years are still being identified.	The species of plants to be used for restoration in 2024 are still being finalised.

<b>4. Habitat degradation, loss &amp; fragmentation associated with camps, borrow pits, quarries and dumping sites</b>					
<p>4.1 Avoid placing any infrastructures in chimpanzee territories, dispersal corridors or current/future protected areas (employ the most up-to-date maps and all baseline data available and conduct thorough pre-construction surveys).</p> <p>4.2 All borrow pits, quarries and dumping sites should be strategically located and designed to avoid and reduce impacts; these should not be placed in protected areas or areas used by chimpanzees.</p>	In progress	Applies for the whole construction period.	WCSR and WCS biodiversity team	<p>Borrow pits, deposit sites and quarries are located as close to the main access road as possible to minimize land disturbance impacts.</p> <p>For land clearing in sensitive areas, additional pre-construction surveys, as part of WCSR's formal land clearance process, were conducted to locate areas where impacts can be minimised. E.g. Due to government requirements that a passenger service must be run along the railway line (note: consensus has been reached not to have any passenger stations within the PNPSS), the previously abandoned inclined shaft #1 of Mamou tunnel (which ARRC visited) will have to be built as an emergency exit. However, signs of chimpanzee activity were observed around the opening of inclined shaft #1. Therefore, an additional pre-construction survey was conducted and the exit opening was relocated to an alternative site, where there were few food sources for chimpanzees and deemed less likely to be used by chimpanzees.</p> <p>To date, due to overlaps with sensitive habitats such as gallery forests and water sources, three borrow pits and dump sites were cancelled while the locations and areas of 13 borrow pits and dump sites were adjusted.</p>	See Annex 2 for map of relocation of exit of inclined shaft #1 to alternative site.
<p>4.3 Rehabilitate or reclaim all sites immediately after closure using best practices.</p>	In progress	Towards the end of the construction period.	WCSR and WCS biodiversity team	<p>Restoration using local species such as <i>Azelia africana</i>, <i>Hibiscus fabiana</i>, <i>Khaya senegalensis</i> and <i>Pterocarpus erinaceus</i> among others has started in 2023 in about 100.48 ha along the railway line. The restoration sites are mainly previously degraded areas next to the project footprint (e.g. fallow lands of local communities).</p> <p>WCSR has identified 178 sites of approximately 9.18 km<sup>2</sup> in total along access roads and railways for restoration in 2024. Restoration sites for subsequent years are still being identified.</p>	The species of plants to be used for restoration in 2024 are still being finalised.

5. Disturbance: Worker presence					
<p>5.1 Minimize worker presence at construction sites.</p>	<p>Implemented</p>	<p>Applies for the whole construction period.</p>	<p>WCSR</p>	<p>A curfew (9pm – 6am) at night is implemented at the camps. Staff are not allowed to go outside of the camps unless in cases of emergency and construction activities at night.</p> <p>Workers access construction sites via transport provided by WCSR. Access to construction sites is thus controlled via the scheduling of the transport arrangements.</p> <p>Every construction site has security personnel to control access.</p>	
<p>5.2 Ensure that codes of conduct (inclusive of code for drivers) and protocols are in place (The code of conduct should include prohibition for staff to capture, hunt, purchase or consume chimpanzees and other bushmeat) with induction training and regular repeat. of training (e.g. with quizzes).</p>	<p>Implemented</p>	<p>Applies for the whole construction period and operations.</p>	<p>WCSR</p>	<p>A Biodiversity Code of Conduct has been in force since Jan 2023. This Code prohibits workers and contractors from consuming, transporting or buying bushmeat, and also prohibits the hunting and keeping of wild animals.</p> <p>The Code is part of the induction process for new employees, who are supposed to sign on it when they start work.</p> <p>The Code was communicated via toolbox sessions and it is planned to repeat these sessions at least once per quarter during quarterly inspections carried out by the WCSR HSE team.</p>	

<p>5.3 Clearly communicate and enforce sanctions for non-compliance to the code of conduct.</p>	<p>Implemented</p>	<p>Applies for the whole construction period and operations.</p>	<p>WCSR</p>	<p>A Biodiversity Code of Conduct has been in force since Jan 2023. This Code prohibits workers and contractors from consuming, transporting or buying bushmeat, and also prohibits the hunting and keeping of wild animals.</p> <p>The Code is part of the induction process for new employees, who are supposed to sign on it when they start work. It includes the communication of potential sanctions in case of non-compliance.</p> <p>The Code was communicated via toolbox sessions and it is planned to repeat these sessions at least once per quarter during quarterly inspections carried out by the WCSR HSE team. It also includes the communication of potential sanctions in case of non-compliance.</p>	<p>Section 6 security personnel captured a monkey near DK262 on 25 July 2023 and kept it at the camp gate. This act is a serious violation of the relevant provisions of Article 2, Paragraph 1 of the Circular on Wildlife Conservation Measures and Control Scheme issued by WCSR (hunting of antelopes, baboons, chimpanzees, and any other wildlife is prohibited during the construction of railroads); as well as the relevant legal provisions of the Guinean Wildlife Conservation and Hunting Law prohibiting the hunting of wildlife. After the incident, the management personnel of Section 6 failed to handle the issue in a timely and proactive manner, which shows a lack of management responsibility and reflects the poor awareness and low importance of biodiversity protection in daily work. As a result, a fine of US\$3,000 was imposed on Section 6 by WCSR, and follow-up training and awareness were carried out and verified to prevent similar incidents from happening again.</p>
<p>5.4 Avoid activity at night as much as possible.</p>	<p>Implemented</p>	<p>Applies for the whole construction period.</p>	<p>WCSR</p>	<p>A curfew (9pm – 6am) at night is implemented at the camps. Staff are not allowed to go outside of the camps unless in cases of emergency and construction activities at night.</p> <p>Workers access construction sites via transport provided by WCSR. Access to construction sites is thus controlled via the scheduling of the transport arrangements.</p> <p>Every construction site has security personnel to control access.</p>	
<p>5.5 All camps should be equipped with ashtrays outdoors and indoors.</p>	<p>Implemented</p>	<p>Applies for the whole construction period.</p>	<p>WCSR</p>	<p>Ashtrays are provided in camps and rest areas.</p> <p>Smoking is prohibited in areas with high risk of fire hazards. No smoking signs are placed in such areas.</p>	

<p>5.6 Staff should be prohibited from smoking in vehicles (huge risk of igniting fires if ashes are dispensed through the window).</p> <p>Staff should be provided with portable ashtrays to prevent accidental fires linked to cigarette smoking.</p>	Implemented	Applies for the whole construction period.	WCSR	<p>Smoking is not allowed during driving, every incident of smoking during driving will incur a fine. However, ashtrays are provided within vehicles to prevent drivers from throwing cigarette butts onto the ground at their rest stops.</p>	
<b>6. Disturbance: noise &amp; dust</b>					
<p>6.1 Ensure all equipment and machinery are fitted with noise and dust reduction technology.</p>	Implemented	Applies for the whole construction period.	WCSR	<p>Noisy machinery and processes are housed within enclosed buildings.</p> <p>All mechanical equipment at the construction site adopts measures such as sound and vibration insulation, all mechanical equipment for steel processing and vehicle maintenance is placed in closed or semi-closed spaces, and sound insulation walls are built around the generator units.</p> <p>Dust suppression measures include:</p> <ul style="list-style-type: none"> <li>- Spraying water on access roads 4-5 times per day during the dry season. The frequency of spraying is increased when and where necessary along community roads and construction sites.</li> <li>- The ground of certain infrastructure such as concrete mixing stations is reinforced with concrete to reduce dust emission</li> <li>- The conveyor belt in the mixing station has been covered to reduce dust emission</li> <li>- A dust collector on the top of the mixing station silo is installed to reduce dust pollution.</li> <li>- Materials such as sand and gravel in the mixing station are covered with tarpaulin during storage.</li> </ul> <p>All powdered materials are transported in a covered or sealed manner to reduce dust generated during transportation.</p>	<p>These measures are in accordance with the WCSR "Noise and Vibration Management Plan" and "Air and Dust Management Plan".</p>
<p>6.2 Reinforce traffic and speed limit controls (see above) and encourage predictability of traffic during operation and maintenance.</p>	In progress	Applies for the whole construction period and operations.	WCSR	<p>Refer to previous recommendations (measures 1.5, 1.6 and 1.7) regarding traffic control.</p>	
<p>6.3 No blasting at night.</p>	Implemented	Applies for the whole construction period.	WCSR	<p>While blasting will continue at night within the tunnels, no blasting will be carried out at night in the open-air quarries.</p>	

<b>7. Disease transmission</b>					
7.1 Portable latrines and garbage disposal units available in all areas where workers are active.	In progress	Applies for the whole construction period and operations.	WCSR	<p>Portable toilets are provided at work sites.</p> <p>All construction sites are equipped with temporary dry toilets, and briefings are conducted for all workers before the start of work at each site every morning. The necessity of using the toilets is explained to them (why they should use them, and the importance of handwashing). On average, a dry toilet is used by 20 workers (this figure is based on the max. no of workers expected).</p> <p>Waste disposal: Waste generated from temporary toilets at construction sites is buried on site. At campsites, septic tanks are used for disposal. The burial sites for sewage were identified respecting environmental criteria, and the watercourses surrounding construction sites, as well as the underground water of construction sites and camps are monitored to check for compliance with project standards.</p>	
7.2 Staff vaccination programme (COVID19; polio, tetanus, measles, mumps, rubella, hepatitis A and B, yellow fever, meningococcal meningitis and typhoid).	In progress	Applies for the whole construction period.	WCSR and WCS Health and Safety team	<p>The logistics of the vaccination programme are being looked into and workers with higher exposure risks shall be prioritised. It is planned that biodiversity and environmental agents whose work frequently requires them to enter natural habitats be offered vaccination on a voluntary basis.</p> <p>Vaccines being considered for field workers are:</p> <ul style="list-style-type: none"> <li>- Diphtheria-Tetanus-Polio 3 in 1</li> <li>- Yellow fever</li> <li>- Typhoid</li> <li>- Meningitis</li> <li>- COVID 19</li> </ul>	<p>The Biodiversity Code of Conduct explicitly prohibits workers and contractors with flu-like symptoms from entering chimpanzee habitats. These habitats are marked by "protected zone" signs put up in the field.</p> <p>See Annex 2 for photo of a "protected zone" sign.</p>
7.3 Need a plan to encourage staff self-declaration of ill-health without penalising workers.	Implemented	Applies for the whole construction period.	WCSR	<p>"Toolbox sessions" that raise awareness on various health topics such as mental well-being, malaria etc have been conducted periodically so that staff understand when they are suffering from ill health and should seek medical attention.</p> <p>Before the start of work at each work site, the team leader will inquire and check the physical condition of all employees, those feeling unwell will be asked to rest and receive treatment to prevent the disease from being transmitted to wild animals while ensuring the safety of employees.</p>	

7.4 Protocol in place and disseminated appropriately to all staff and camp residents as to what do to do or not to do when encountering the carcass of a dead animal, especially a chimpanzee (Including if staff encounter dead or injured ape.)	In progress	Applies for the whole construction period.	WCSR and WCS biodiversity team	<p>This protocol (which is combined with the protocol on encountering captive and injured wildlife) was disseminated in Nov 2023.</p> <p>Awareness raising of this protocol was carried out via “toolbox sessions” in April and May 2024.</p>	
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## Indirect impacts

This table presents the progress of the implementation of the mitigation measures for the indirect impacts of the project.

ARRC Recommendations	Status of implementation	Target completion date	Responsibility	Implementation result
<b>8. Facilitation of access associated with access roads: logging and charcoal production; agricultural activities, hunting</b>				
8.1 Urgent need for placement and operationalisation of strategically placed multi-partner (OGPNRF/Eaux et Foret, WCF, WCS/Rio Tinto) control posts with a clear mandate (permission for placement and assessment of needs are to be made immediately to reduce any administrative delays; temporary posts need to be put in place in the interim until formal implementation completed as impacts are already visible). This would need to be done in Kounounkan, tunnel areas and in the PNPSS.	In progress	Applies for the whole construction period and operations period.	OGPNRF, WCSR and WCS biodiversity team	<p>Agreement reached with OGPNNRF to install 6 control posts in the PNPSS region and conduct the following patrols every month:</p> <ul style="list-style-type: none"> <li>a. Patrols along access roads</li> <li>b. Anti-poaching patrols</li> </ul> <p>The patrol routes and exact days of the month for the patrols are based on intelligence gathered from the field and thus, not fixed. Control posts are co-manned by WCSR security agents and OGPNNRF rangers while patrols will be carried out by OGPNNRF rangers only. There will be up to 12 WCSR security agents and 30 OGPNNRF rangers.</p> <p>All materials and equipment for the control posts have already been procured and all control posts will be operational in May 2024. Two posts are already operational.</p>
<b>9. Influx of people and ‘spontaneous’ settlements</b>				
<p>9.1 Construction of camps and temporary living bases for all staff and any permitted vendors, that include necessary facilities (e.g. latrines, water supply, shops).</p> <p>9.2 Control of access to camps for ‘residents’ only (e.g. through access cards). Control and prevention of bushmeat consumption in the living bases.</p>	In progress	Applies for the whole construction period.	WCSR	More temporary accommodation will be built for workers who still need to live near the project sites. More updates on the progress will be provided in subsequent replies.

**10. Increase in negative interactions between people (local, immigrants and staff) and chimpanzees (risk of killing and capture of chimpanzees, attacks of chimpanzees, chimpanzee crop foraging)**

<p>10.1 Avoid unnecessary felling of nesting tree species and fruit trees or vines of importance to chimpanzees or elephants to maximally preserve their natural food resources to minimise risks of crop foraging.</p>	<p>In progress</p>	<p>Applies for the whole construction period.</p>	<p>WCSR and WCS biodiversity team</p>	<p>rees near the railway line have been marked for protection, some of which are food sources for chimpanzees. Some of the trees important to chimpanzees which have been marked are (data up till May 2024 and for the entire railway line):</p> <table border="1" data-bbox="1249 384 1868 683"> <thead> <tr> <th>Species</th> <th>Quantity of marked trees</th> </tr> </thead> <tbody> <tr> <td><i>Adansonia digitata</i></td> <td>1</td> </tr> <tr> <td><i>Bombax costatum</i></td> <td>34</td> </tr> <tr> <td><i>Carapa procera</i></td> <td>3</td> </tr> <tr> <td><i>Detarium senegalense</i></td> <td>2</td> </tr> <tr> <td><i>Parkia biglobosa</i></td> <td>536</td> </tr> <tr> <td><i>Pseudospondias microcarpa</i></td> <td>3</td> </tr> <tr> <td><i>Spondias mombin</i></td> <td>9</td> </tr> </tbody> </table> <p>See Annex 2 for photo of a tree marked for protection.</p> <p>Sensitisation of communities and in-migrant settlements about specific tree protection is conducted by WCSR community and biodiversity agents.</p> <p>Sensitisation programs, including species protection, are being developed and chances will be explored to subcontract to local NGOs.</p>	Species	Quantity of marked trees	<i>Adansonia digitata</i>	1	<i>Bombax costatum</i>	34	<i>Carapa procera</i>	3	<i>Detarium senegalense</i>	2	<i>Parkia biglobosa</i>	536	<i>Pseudospondias microcarpa</i>	3	<i>Spondias mombin</i>	9
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<p>10.2 Essential to avoid and minimise impact on waterways as outlined above; loss of water resources could attract wildlife closer to human settlements or water sources/ points used by people hence increasing risk of encounter between people and wildlife, including chimpanzees and elephants.</p>	<p>In progress</p>	<p>Applies for the whole construction period.</p>	<p>WCSR and WCS biodiversity team</p>	<p>Refer to waterway protection measures 2.1 and 2.2 detailed in the direct impacts table above.</p> <p>See photo in Annex 2 on an anti-erosion protection measure on riverbank slopes.</p>																
<p>10.3 Awareness raising concerning laws relevant to chimpanzees, their behaviour, and how to and not behave when seeing chimpanzees.</p>	<p>In progress</p>	<p>Applies for the whole construction period and operations period.</p>	<p>WCSR, WCS biodiversity team and NGOs</p>	<p>A training plan has been developed for 2024: biodiversity conservation awareness training for all local staff to raise awareness of chimpanzee-related laws, chimpanzee behaviour, and what to do when seeing a chimpanzee has started in March 2024.</p> <p>The WCSR HSE Department, in conjunction with community staff, is planning to conduct awareness-raising training on biodiversity and environmental protection for local communities. However, the exact content of the training and the number of communities that will be targeted is still to be confirmed. There are over 80 construction sites along the railway, so the expectation is approx. 200 impacted villages to be sensitised.</p> <p>Sensitisation programs, including species protection, are being developed, and chances will be explored to subcontract to local NGOs.</p>																

<b>11. Disturbance to chimpanzee behaviour, movement and ecosystem associated with an increase in fires</b>				
<p>11.1 Understand main reasons for fires. Identify solutions to resolve the root causes for setting fires (e.g. livestock herders, slash and burn).</p>	<p>In progress</p>	<p>Applies for the whole construction and operations period.</p>	<p>WCSR and WCS biodiversity team</p>	<p>It is understood that fires are set by local communities for slash-and-burn agriculture, and for generating grazing pastures.</p> <p>As part of the Management plan of the future PNPSS, a fire prevention program will be developed by WCF/OGPRNF, and its implementation will be supported by WCS/RT.</p> <p>Fire prevention program is also part of the scope from the control post patrol program conducted by OGPRNF (measure 8.1) and will also be included in the PNPSS community surveillance program with WCF (see below measure for more details).</p>
<p>11.2 Set up fire brigades comprised of local villagers.</p> <p>Develop with relevant stakeholders plans for early fires ('feux précoces') to reduce damage caused by fires later in the year.</p>	<p>In progress</p>	<p>Applies for the whole construction and operations period.</p>	<p>WCSR and WCS biodiversity team</p>	<p>Eleven plant nursery groups have been formed along the railway line, each section having a nursery managed by a grouping made up of villagers from local communities. In addition to managing the nurseries, these groupings will also support fire management such as the establishment of fire breaks. In the dry season of 2023/2024, 19 fire breaks were set up along the corridor, for a total of 5.7ha.</p> <p>In addition to the internal fire management plan, a surveillance program of the PNPSS in collaboration with WCF is being initiated. The regular presence of rangers/eco-guards in the park will minimise the threats and degradation of the ecosystem. The objective of this program is to strengthen the protection of the PNPSS by improving community surveillance. Surveillance will be supported in parallel with raising awareness in local communities about the importance of conserving the area and communication about the types and levels of activities permitted. This work will be undertaken by WCF in collaboration with the OGPRNF and local communities. Surveillance activities will include;</p> <ul style="list-style-type: none"> <li>• The creation of 10 mixed surveillance teams. Each team will include at least one member of OGPNRF, rangers from WCF and four trained local community eco-guards. Each team is responsible for patrolling a certain area to observe, document and control illegal human activities.</li> <li>• Raising awareness among resident communities around the values of the PNPSS, and what activities cannot be undertaken in core areas of the PNPSS.</li> <li>• The creation of data sets using Cybertracker and SMART software. This will improve the understanding of the locations and extent of human induced threats as well as dissuading future threats. This data will also feed into other activities which are all part of the creation and long-term management of the future PNPSS.</li> </ul>

<b>12. Disease transmission</b>				
12.1 Installation of latrines in villages within project's Area of Influence.				<p>There are plans to build latrines at each nursery, which will be shared by the community. Waste generated will be "composted" and used for fertilizing.</p> <p>However, there are no plans to build toilets in the villages by WCSR. It will potentially be assessed as part of, in alignment with the PDL (Local development plan) of each commune and more specifically with the National Park management plan for the PNPSS.</p>
12.2 Protocol in place and disseminated to local villagers as to what do to do or not to do when encountering the carcass of a dead animal, especially a chimpanzee.	In progress	Applies for the whole construction and operations period.	WCSR, WCS biodiversity team and NGOs	<p>Awareness raising planned for local communities.</p> <p>Refer to the information provided in measure 7.4 detailed in the direct impacts table above.</p>
<b>13. Trapping, hunting and capture of chimpanzees</b>				
13.1 Support OGP/NRF/WCF patrols in OKKNPS landscape in protected areas within the project's AoI.	In progress	Applies for the whole construction and operations period.	OGPNRF, WCSR, and WCS biodiversity team	See above in measure 8.1 for more details on anti-poaching patrols as part of the control post scope with OGPNRF.
13.2 Sensitization campaigns in villages conducted by appropriate and competent entities.	In progress	Applies for the whole construction and operations period.	WCSR, WCS biodiversity team and NGOs	Awareness raising planned for local communities. More updates will be given in a subsequent reply.

## Annex 2 – Illustrations of some mitigation measures



Measure 1.8:  
An example of a culvert  
under the railway which  
also functions as an  
animal passage.



Measure 1.8:  
A corrugated bridge  
serving as an eco-flyover  
(example from other  
projects).



Measure 1.8:  
Construction of railway  
bridge in progress which  
also functions as a  
crossing for elephants.



Measure 1.8:  
Construction of railway  
bridge in progress which  
also functions as a  
crossing for elephants.



Measure 2.1:  
Stone masonry as a  
protective measure on  
slopes next to culverts.



Measure 2.1:  
Effluent from a mixing  
station being pre-  
treated in a three-stage  
sedimentation tank before  
discharge.



Measure 3.1: Erosion prevention measures at tunnel entrance to protect drainage.



Measure 4.1: Relocation of exit of inclined shaft #1 to alternative site to avoid area of chimpanzee activity.



Measure 7.2: An example of a "protected zone" sign to mark out sensitive areas in the field.



Measure 10.1:  
A marked *Parkia biglobosa*  
tree.



Measure 10.2:  
Anti-erosion protection  
measure on riverbank  
slopes of a bridge  
construction site.