

The Aurora Gold concession is located in the coastal lowlands/Atlantic Coastal Shelf region of northwestern Guyana, approximately 170 km inland from the Atlantic coast. This area is part of the Guiana Shield, a vast tropical wilderness covering over 2.2 million square kilometers in northern South America and containing over 25% of the world's tropical rainforests. Approximately 72% of Guyana is covered with tropical rainforest and savannah ecosystems. Most of these ecosystems are unmodified by human activity, making this region one of the largest tracts of contiguous rainforest on Earth. The Aurora concession is located on the Cuyuni River in mostly pristine lowland rainforest. ASM has been going on in the area for many years and has been increasing due to the high price of gold in recent years. Mining in the headwaters of the Cuyuni River in Venezuela has resulted in high sediment load and high turbidity along the entire Cuyuni River course.

The Aurora project area does not lie within any legally protected areas. The Project site is also not within any recognized Key Biodiversity Areas (KBAs) or Important Bird Areas (IBAs) but that is because, to date, KBAs/IBAs have not been designated for Guyana. However, the Guyana Shield Priority Setting workshop (2002) identified part of this region (Cuyuni Area No. 20) as of biological importance and biogeographically distinctive. This area has not been evaluated because it is mostly unstudied and thus the biodiversity value of the area remains largely unknown.

History of Biodiversity Studies and IFC Involvement

Since its involvement dating back to 2006, IFC has been able to advise and guide the Company on biodiversity issues and PS6 requirements. Baseline biodiversity data collection for Guyana Goldfields has taken place over a 6-year time span by different consulting companies and scientists (2006-2012). As mentioned above, an initial study was conducted by WWF in 2006 as a pre-requisite for the equity investment in order to gain a better understanding on the biodiversity resources in the area and potential impacts from the Project. IFC reviewed and provided suggestions on six of the biodiversity surveys. Also, at the request of IFC, international giant otter specialist Dr. Nicole Duplaix completed a specialized survey for giant otters along the Cuyuni River. IFC also required that the Project have independent reviews of their 2012 surveys and ESIA. In this sense, the 2012 biodiversity surveys were reviewed by the Center for the Study of Biological Diversity (CSBD) of the University of Guyana and the 2013 ESIA was reviewed by Golder Associates.

Baseline and Habitat Characterization

The Aurora Concession is located mostly in Natural Habitat with high species diversity. The Project's ESIA reports that much of the area is modified by artisanal mining but the ESIA does not provide quantitative estimates of the modified habitat. The region is still mostly extensive primary rainforest

as can be seen from satellite imagery, aerial photographs, and when flying over the area. Within the Aurora concession, several areas have been modified by the historic exploration activities that have been conducted since the 1930s.

All of the biodiversity studies have reported high species diversity, although the 2013 ESIA biodiversity studies conducted in the Project area do not indicate any critical habitat areas with high biodiversity value. No habitat has been identified that is of significant importance to critically endangered, endangered, endemic, and/or restricted-range species. Similarly, no habitats have been observed that support globally significant concentrations of migratory and/or congregatory species, highly threatened and/or unique ecosystems, and/or any areas associated with key evolutionary processes.

The only species documented in the ESIA that is listed on the IUCN Red List of Threatened species as Critically Endangered (CR) or Endangered (EN) is the Giant River Otter, which was seen in the area in 2009. However, it has not been seen since and studies by otter expert, Dr. Duplaix, reveal that most of its habitat has been lost due to artisanal mining impacts on the Cuyuni River. The lowlands of the Guiana Shield in general do not have many threatened or endemic species, making designation of Critical Habitat in any lowland areas unlikely. However, the mostly pristine nature of the region and the high levels of biodiversity make the region of high importance for biodiversity conservation.

Impacts

The main impacts of the Project on biodiversity will be related to the clearing of rainforest (Natural Habitat). To the extent practicable, the Project has reused existing modified habitats (for example the current airstrip and camp areas, laydown areas, access roads, and drill pad areas from historical subsurface explorations) for the siting of new facilities and proposed mining activities. Also, following an iterative design process, the Project area to be impacted has been reduced from 3898 ha to 1911 ha. The ESIA lists the amount of area to be disturbed as natural habitat (561 ha), modified habitat (50 ha) and streams (12.6 ha).

As noted in the ESIA, there is potential for indirect impacts on biodiversity resources from the roads, which will need to be mitigated per actions described also in the ESIA. Prohibition on hunting, fishing, harboring of wild animals, or introduction of invasive species by the Project workforce or contractors will also need to be strongly enforced. Please refer to the section above with more detail on Influx Management.

Mitigation

Since most of the Aurora Project area is Natural Habitat, PS6 requires that the Project implement mitigation measures designed to achieve “no net loss” wherever feasible. Given that the Aurora Project is in an extensive tract of lowland rainforest with high levels of biodiversity, IFC concludes that PS6 in this case requires a strong No Net Loss of Biodiversity approach. This will require an “Offsets Strategy” in addition to the on-site mitigation actions proposed in the ESIA.

A strong Biodiversity Monitoring and Evaluation Program (BMEP) will also need to be developed to determine compliance with PS6 requirements and to demonstrate “No Net Loss” of biodiversity over the long term. Monitoring results will enable the Project to take an adaptive management approach with respect to managing impacts. The design will include appropriate metrics and threshold values with the aim of measuring progress towards the overall goal (No Net Loss of biodiversity). A qualified organization or consultant should be retained by the Project to design and implement the BMEP.

In order to achieve “no net loss” of biodiversity, where feasible, the ESIA states that the Project will:

Promote the restoration of basic ecological processes in areas of existing degraded habitat (i.e., restore and, where appropriate, re-vegetate land areas impacted by historical ASM or other intrusive human activities) within the Aurora concession;

Conduct progressive rehabilitation of lands affected by the Project (e.g., progressive reclamation of waste rock stockpiles using native species in accordance with the Project Mine Reclamation and Closure Plan;

Carry out continual monitoring for erosion and control of erosion and sedimentation;

Re-vegetate with native species and construction of sediment control structures in accordance with the Erosion Prevention and Control Plan;

Implement a routine biodiversity monitoring program within the Aurora concession per the Biodiversity Management Plan and ESHS Monitoring Plan;

Implement specific mitigation measures for the protection of any identified sensitive species and habitats, per the Biodiversity Management Plan;

Implement GIIPs in the Erosion Prevention and Control Plan and Water Management Plan to manage sediment generation from waste rock/topsoil stockpiles; and to detect and mitigate erosional conditions in other disturbed areas.

Following IFC's due diligence and the review of the ESIA by the IESC, additional requirements were identified to include the need for a Biodiversity Management Plan (BMP) which will be prepared in advance of major construction to ensure all aspects of the mitigation hierarchy are followed as committed to in the ESIA (See Action # 8 of ESAP). The main objectives of the BMP will include:

The definition of specific avoidance, management and mitigation measures for biodiversity resources for the Project (flora, fauna, habitats, ecosystems);

The planning and definition of set-asides and other mitigation measures ahead of construction to achieve No Net Loss (see specific section on Offsets below);

The definition of a Biodiversity Monitoring and Evaluation Program (BMEP) to determine compliance with PS6 requirements and to demonstrate "No Net Loss" of biodiversity over the long term.

Additional elements of the BMP will include:

A re-definition of a broader study area such as the Lower Cuyuni Basin in Guyana, or as advised through discussions with the partner NGO the Centre for the Study of Biological Diversity (CSBD) at the University of Guyana;

A map using GIS of the concession and surrounding area using high-resolution imagery. Existing disturbance should be split as possible by old disturbance versus exploration or

other disturbance by Guyana Goldfields to help quantify restoration targets needed to achieve no net loss of natural habitats. The percent of the project area of influence (AOI) and the broader area that is Natural and Modified Habitat – both old and new modifications- should be calculated and mapped;

The management of potential invasive flora and fauna species should be addressed within the BMP ahead of major construction and the bringing in of extra equipment and manpower. It would be important to get a baseline of plant and animal (e.g. some key insect groups) at selected points along the road and then to monitor these points annually for any invasive plant or insect species (e.g. ants).

Biodiversity Offsets

A qualified organization or consultant with expertise on biodiversity offsets will be retained by the Project to design and implement an Offsets Strategy to achieve strong No Net Loss of Biodiversity.

The Offsets Strategy will consider the following:

Assessment of how to achieve “Not Net Loss”- a loss/gain approach. How much biodiversity is lost and how much will be gained through mitigation and offsets;

Preliminary identification of offset options- what are theoretically feasible options for an offset to achieve No Net Loss of Biodiversity;

It is recommended that the Project take the “Habitat Hectare” approach to offset the amount of rainforest lost through impacts (there are standard approaches to this);

The biodiversity offset must contain the same biodiversity values that are lost through residual impacts. However, in some cases, an offset may include “trading up” in which the offset conserves higher biodiversity values than are present in the impacted area;

The Offsets Strategy should consider amount of area to be disturbed in natural habitat (561 ha), modified habitat (50 ha), and streams (12.6 ha).

Ecosystem Services

The only ecosystem service upon which Guyana Goldfields might be considered to depend on is the provisioning of water for industrial uses at the Aurora site, and for firefighting uses at the Buckhall site. However, Guyana Goldfields has no direct management control over or significant influence on the provisioning of water at either location. At Buckhall, firefighting water will be pumped from the Essequibo River on an as needed basis. At the Aurora site, there will be no direct abstraction of water from the Cuyuni River. Raw water for industrial purposes will be obtained from water wells drilled into the underlying bedrock, collection of surface water from creeks, and rainwater harvesting systems.