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Ministry of Natural Resources Suriname

Strategic Environmental and Social Assessment (SESA) for the Mining Sector of Suriname

SESA FINAL Report

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ABBREVIATIONS AND ACRONYMS

°C	Degree Celsius
ACGIH	American Conference of Governmental Industrial Hygienists
ACT	Amazon Conservation Team
AGC	Artisanal Gold Council
AMD	Acid Mine Drainage
AOI	Area of Impact
AQG	Air Quality Guidelines
ARD	Acid Rock Drainage
ARM	Alliance for Responsible Mining
ASGM	Artisanal and Small-scale Gold Mining
ASM	Artisanal and Small-Scale Mining
ASMO	Artisanal Small-Scale Mining Organization
AZE	Alliance for Zero Extinction Site
AWJ	Ministry of Labour, Employment and Youth Affairs
BGI	Better Gold Initiative
BIS	Bauxite Institute of Suriname
BOD	Biochemical Oxygen Demand
BOG	Bureau for Public Health
CARICOM or CC	Caribbean Community
CCKP	Climate Change Knowledge Portal
CCRA	Climate Change Risk Assessment
CELOS	Center for Agricultural Research in Suriname
CEPF	Critical Ecosystem Partnership Fund
CITES	Convention on the International Trade of Endangered Species of Wild Fauna and Flora
CO	Carbon Monoxide
COD	Chemical Oxygen Demand
COP	Conference of the Parts
CPS	Country Partnership Strategy
CR	Critically Endangered
CS	Country Strategy
CSNR	Central Suriname Nature Reserve
Db	Decibel
DbA	Decibel A Scale
DD	Data Deficient
DHI	Diffuse Horizontal Irradiation
DIS	Mineral Institute of Suriname
DNI	Direct Normal Irradiation
DWV	Water Supply Service
EA	Environmental Assessment
EAS	Energy Authority Suriname

EC	European Council Directives
EHS	Environmental Health Safety
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EITI	Extractive Industries Transparency Initiative
EN	Endangered
ENSO	El Niño Southern Oscillation
EPRM	European Partnership for Responsible Minerals
ESMF	Environmental and Social Management Framework
EU	European Union
EW	Extinct in the Wild
EX	Extinct
FAO	Food and Agriculture Organization of the United Nations
FOB	Funding Development Interior
FPIC	Free, Prior and Informed Consent
FS ASM	Forest-Smart Artisanal and Small-Scale Mining
GAP	Global Advisory Panel
GBB	Ministry of Land Policy and Forest Management
GBS	General Statistics Office of Suriname
GDP	Gross Domestic Product
GEF	Global Environment Facility
GFDRR	Global Facility for Disaster Reduction and Recovery
GHG	Greenhouse Gas
GIS	Geographic Information System
GLiM	Global Lithological Map
GMD	Geological Mining Department
GOMIAN	Small Scale Gold Mining in the Amazon
GOS	Government of Suriname
ha	Hectare
HAV	Hand-Arm Vibration
HFLD	High Forest Cover, and Low Deforestation
HFO	Heavy Fuel Oil
Hz	Hertz
IADB	Inter-American Development Bank
ICAS	Institutional Capacity Assessment System
IBA	Important Bird and Biodiversity Area
IBAT	Integrated Biodiversity Assessment Tool
IBRD	International Bank for Reconstruction and Development
ICMM	International Mining Standards
ICT	Information and Communication Technology
IDB	Interamerican Development Bank
IFC	International Finance Corporation

IGF	Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development
IICA	Inter-American Institute for Cooperation on Agriculture
ILO	International Labor Organization
IP	Indigenous People
IPCC	Intergovernmental Panel on Climate Change
IPLCs	Indigenous Peoples and Local Communities
ISEAL	Initiative for Responsible Mining Assurance
ITCZ	Inter Tropical Convergence Zone
ITPPF	Indigenous and Tribal Peoples Planning Framework
IUCN	International Union for Conservation of Nature
KAMPOS	Collaboration of Tribal Peoples in Suriname
KBA	Key Biodiversity Area
KLIM	Kaliña en Lokono Inheemsen Beneden Marowijne
km²	Square kilometer
KOPI	Statistical Data for the National Forest Monitoring System
KPI	Key Performance Indicator
KSMH	Kaloti Suriname Mint House
LAeq	Equivalent Continuous Sound Pressure Level
LAmax	Maximum Sound Level at an Instant in Time
LBB	Suriname Forest Service
LC	Least Concern
LMO	Live Modified Organism
LR/CD	Lower Risk/Conservation Dependent
LSGM	Large-Scale Gold Mining
LULC	Land Use Land Cover
LVV	Ministry of Agriculture, Animal Husbandry and Fisheries
m	Meter
m³	Cubic Meter
MARPOL	International Convention for the Prevention of Pollution from Ships
mg/l	Milligram per Liter
mg/m³	Microgram per Cubic Meter
MI-GLIS	Management Institute for Land Registration and Land Information System
MinOWC	Ministry of Education, Science and Culture
ML	Metals Leaching
MNR	Ministry of Natural Resources of the Government of Suriname
MPN	Most Probable Number
MRDS	Mineral Resources Data System
MSG	Suriname Multi-Stakeholder Group
MUMA	Multi Use Management Areas
N.A	Not Applicable
NAP	National Action Plan
NCCR	National Coordination Center for Disaster Relief

NCD	Nature Conservation Division
NDC	Nationally Determined Contribution
NDP	National Development Plan
NGO	Non-Government Organization
NIMOS	National Institute for Environment and Development in Suriname
NMA	National Environmental Authority
NMR	National Council for the Environment
NO_2	Nitrogen Dioxide
NRDC	Natural Resources Defense Council
NT	Near Threatened
NZCS	National Zoological Collection Suriname
O_3	Ozone
OGS	Suriname Gold Sector Regulation Commission (Dutch abbreviation)
OHS	Occupational Health and Safety
OIS	Organization of Indigenous Communities of Suriname
OP	Operational Policies
OW	Ministry of Public Works
PBL	Policy-Based Loan
PCR	Physical Cultural Resources
pH	Potential of Hydrogen
PM	Particulate Matter
POP	Persistent Organic Pollutants
PS	Performance Standards
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RGB	Ministry of Spatial Planning, Land and Forestry Management
RIL	Reduced Impact Logging
RINA	RINA Consulting Inc.
ROM	Ministry for Spatial Planning and Environment
RPF	Resettlement Policy Framework
RSA	Rapid Social Assessment
SBB	Foundation for Forest Management and Production Control
SBGA	Swiss Better Gold Association
SCSD	Suriname Competitiveness and Sector Diversification Project
SEP	Standard-Essential Patents
SESA	Strategic Environmental and Social Assessment
SLR	Sea Level Rise
SMEs	Small and Medium-Sized Enterprises
SO_2	Sulfur Dioxide
SRD	Surinamese Dollars
STINASU	Foundation for Nature Conservation in Suriname
SWM	Surinamese Water Company
SWRIS	Suriname Water Resources Information System

TCFD	Task Force on Climate-related Financial Disclosures
TDS	Total Dissolved Solids
TLV	Threshold Limit Values
ToR	Terms of Reference
UN	United Nations
UNCLOS	United Nations Convention for the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
VIDS	Association of Indigenous Village Leaders in Suriname
VU	Vulnerable
WASH	Access to Safe Drinking Water, Sanitation and Hygiene
WB	World Bank
WBG	World Bank Group
WBV	Whole Body Vibration
WDPA	World Database on Protected Areas
WHO	World Health Organization
WTO	World Trade Organization
WWF	World Wildlife Fund

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EXECUTIVE SUMMARY

PROJECT CONTEXT

RINA Consulting, Inc. (RINA) was retained by the Ministry of Natural Resources (MNR) of the Government of Suriname (GOS) to conduct a Strategic Environmental and Social Assessment (SESA) of the Mining Sector financed by the World Bank Group's (WBG). The GOS has recognized the importance of strengthening the legal and regulatory framework and improving environmental governance in response to the potential rapid growth of the mining sector. The SESA process implies an evaluation at a strategic level for the general environmental and social consequences resulting from the implementation of a certain plan, program or policy (such as a policy for the development of the mining sector in Suriname).

The Strategic Environmental and Social Assessment (SESA) is to serve as a tool to help ensure that mining development proceeds in a sustainable manner in accordance with best international environmental and social practices and standards and in alignment with the long-term sustainability goals of the National Development Plan. The SESA focuses on large-scale gold mining (LSGM), artisanal small-scale gold mining (ASGM) and Bauxite.

The SESA project is part of the Suriname Competitiveness and Sector Diversification Project (SCSD), which consists of three components: Component 1: Strengthening the mining sector governance, transparency, accountability, and administration; Component 2: Investing in Small and medium-sized enterprises (SMEs) and value chains in targeted emerging industries; Component 3: Project management and evaluation.

SESA OBJECTIVES

The SESA comprises a comprehensive mining sector-wide examination of potential environmental and social impacts, both positive and negative, of future potential investments in the sector. Through addressing weaknesses in the current legal, regulatory and institutional framework it is intended to enable the GOS to integrate principles of sustainable development both upstream in sector planning efforts and downstream when specific projects are being prepared or evaluated.

The expected outcome of the SESA is a series of concrete measures for the mining sector of Suriname to improve environmental protection, ensure the well-being of local populations, particularly Indigenous and tribal communities, and for the clear identification of institutional responsibilities for government, private sector, and civil society.

The SESA is also intended to contribute to a more transparent understanding of environmental and social regulations, creating a more level playing field for future private investors and sustainable development.

The objectives of the SESA are:

- ✓ To identify the social and environmental impacts that could be generated by the development of the mining sector and evaluate the scope and likelihood of these impacts due to increased activities in the sector;
- ✓ To put forward measures to avoid, manage and/or attenuate these impacts;
- ✓ To facilitate the integration of these measures into a coherent policy and ensure their application; and
- ✓ To help in capacity building and training of GOS officials in the management of mining sector impacts, in particular within the Ministry of Natural Resources (MNR) and the National Institute for Environment and Development (NIMOS).

SESA METHODOLOGY

The methodology employed in the SESA has been informed by interaction with the GOS and Suriname stakeholders and general best practice from the mining sector. It was designed to be consultative and

participatory in order to help strengthen institutional capacity, identify and introduce good practice and raise awareness of the need to integrate environmental and social concerns into the mining sector. This approach also seeks to uphold Indigenous and Maroon Peoples' rights to fair, free, culturally appropriate, and transparent consultation and participation, in line with the World Bank ITPPF and the Indigenous and Tribal People FPIC procedures.

The development of the SESA follows six main stages, and an additional concurrent stage as follows:

- Stage 1. Scoping and Inception reports, including a desktop review of relevant information, stakeholder mapping, establishment of SESA goals and objectives, and workshops and meetings with stakeholders;
- Stage 2. Description of the GOS regulatory and institutional framework relating to environmental, social, and occupational health and safety assessment and management and assessment of GOS institutional capacity;
- Stage 3. Identification and analysis of the environmental and social impacts and consequences of the forecasted future development of mining;
- Stage 4. Proposed mitigation and monitoring measures for the consequences / impacts identified at Stage 3;
- Stage 5. Formulation of SESA action plan;
- Stage 6. Final consultations, review, and approval of SESA Report and its Action Plan.
- Concurrent stage. Capacity building and advisory services aimed to assist the GOS, staff from the MNR, the Minerals Institute, NIMOS, and other relevant ministries, including the Ministry of Finance, to build the required technical skills and managerial capabilities to regulate and monitor the mining sector in the country.

KEY FINDINGS

The key findings of the SESA can be summarized as follows:

Institutional capacity;

1. There is a lack of clearly defined roles and responsibilities for the monitoring of social and environmental impacts in the mining sector;
2. The institutional capacity assessment of MNR showed several sectors that need strengthening to ensure proper implementation of the regulatory framework;
3. The current NIMOS has a weak institutional capacity and needs urgent reinforcement to carry out its legal duties and responsibilities as NMA;
4. The GOS currently has insufficient resources to ensure the monitoring and evaluation of mining projects.

Legal and Regulatory Framework

5. The implementation of the SESA needs to be undertaken by the main authority responsible for the mining sector, the MNR;
6. The legal and regulatory framework lacks specificity, guidelines, and regulatory limits on discharge and emissions for mining activities. Clear standards and monitoring strategies are necessary to ensure its enforcement;
7. There is currently unrestricted use of mercury and other toxic substances used, particularly in the gold mining industry;
8. Mining contracts are not standardized and therefore lack transparency;
9. The new SCSD grievance mechanism needs to be socialized and implemented;

10. Many ASM workers are not formalized and are often operating illegally. The government has limited capacities and resources to address ASM's negative environmental and social impacts.
11. The international treaties and human rights declarations that Suriname has ratified and cosigned have still not resulted in the necessary legislation for the recognition, respect, and protection of the rights of Indigenous peoples, even despite the judgment by the Inter-American Human Rights Court in 2015 and many international reminders.

Environmental protection and mitigation measures

12. In anticipation of adopting the Environmental Framework Act, NIMOS published Guidelines for Environmental and Social Impact Assessment in 2005 and specific Guidelines in the following years. Based on these guidelines, NIMOS has been administering the implementation of ESIAs since 2005;
13. NMA shall be the successor to the NIMOS, which will transition into the NMA, yet at the time of this Action Plan, the NMA is not yet operational;
14. Mitigation measures must be monitored by NIMOS/NMA/MNR to verify their effectiveness and modify them in case of inefficiency;
15. There is no national capacity to respond to accidents or other emergencies;
16. There are currently no discharge or emission standards in Suriname. IFC recommends standards that are sometimes used;
17. The GOS currently lacks structured and regulated waste and wastewater management system;
18. The current regulatory framework does not require that mining companies include provisions in case of environmental or social damage;
19. Mining companies do not always have a post-closure plan;

Public participation and information sharing

20. Communities, particularly Indigenous and tribal people, say they are not previously informed of mining projects and are faced with the situation after the fact;
21. There is currently little exchange of information between GOS and stakeholders; the GOS holds much information that remains unpublished and not updated, as shown on the GONINI website;
22. There are few capacity-building programs available to inform and train miners on alternate mining methods, formalization of ASM, and other mining-related issues;
23. There are currently limited income-generating opportunities in mining for people living in mining communities where the priority of workers should be selected from the local community;
24. Sensitive areas have been invaded by mining activities affecting the environment, biodiversity, and cultural heritage areas, threatening protected areas;
25. Explicit mechanisms for benefit sharing to affected people are not expressed in Suriname's legal and regulatory framework. At the same time, communities claim they are not receiving any compensation for the mining activities in their territories.

SESA ACTION PLAN AND STRATEGIC RECOMMENDATIONS

Based on the information and key findings from the SESA process, a series of strategic recommendations have been developed, and an Action Plan with its associated activities is proposed. The recommended activities are prioritized based on proposed timeline for their initiation, as follows:

- Short-term (within 1 to 2 years),

- Medium-term (within 3 to 4 years),
- Long-term (within 5 to 7 years),

The strategic recommendations are proposed for initial implementation in order to comply with SESA recommendations, with requirements for further activities and capacity building expected to be identified during implementation of the proposed initial actions.

The following shows the 25 proposed strategic recommendations according to their implementation timeframe, the first five being those that should be implemented immediately.

Short-term priority action recommendations

- R1 Strengthen regulatory institutions, their legal frameworks, and enforcement mechanisms;
- R2 Strengthen day-to-day operations of MNR to ensure appropriate and efficient management;
- R3 Strengthen the institutional capacity of NIMOS;
- R5 Confirm MNR as the SESA implementation agency;
- R6 Amend and formalize the mining act to remove ambiguities, vagueness, and ministerial discretion;
- R8 Standardize mining contracts with medium-scale and large-scale companies;
- R9 Support the application of the grievance redress mechanism to address concerns and complaints related to mining activities;
- R11 Recognize Indigenous and tribal peoples as a collective community and legal entity in order to safeguard their rights;
- R12 Strengthen regulations related to the EIA / ESIA processes;
- R20 Improve public consultation, community, and stakeholder engagement;
- R21 Provide freedom of information with open access to geographic information and data of the mining sector;
- R24 Recognize sensitive, cultural heritage and protected areas as no-go areas for mining activities.

Medium-term action recommendations

- R4 Strengthen the monitoring and evaluation capacity of government agency personnel;
- R13 Establish the National Environmental Agency (NMA) to facilitate environmental compliance;
- R14 Prioritize environmental protection with mitigation and monitoring measures;
- R15 Implement a comprehensive approach to mining accident prevention and response;
- R16 Establish clear discharge and emission limits;
- R18 Establish environmental and social damage liability provisions for mining operations;
- R19 Implement well-planned mine closure and post-closure land use plans to restore environmental integrity and ensure the well-being of communities;
- R22 Invest in capacity building and awareness-raising for mining companies and miners;
- R23 Create employment opportunities in mining;
- R25 Promote transparency and accountability towards the social distribution of benefits.

Long-term action recommendations

- R7 Phase out the use of toxic substances used in mining;
- R10 Formalize and mainstream ASM in the country's socioeconomic activities to mitigate risks from the informal economy and improve working conditions;
- R17 Promote the circular economy model through the reuse and recycling of water and waste.

SAMENVATTING (EXECUTIVE SUMMARY DUTCH VERSION)

PROJECT CONTEXT

RINA Consulting, Inc. (RINA) werd ingehuurd door het Ministerie van Natuurlijke Hulpbronnen (MNR) van de Surinaamse overheid (GOS) om een Strategische Milieu- en Sociale Beoordeling (SESA) van de Mijnbouwsector uit te voeren, gefinancierd door de Internationale Bank voor Wederopbouw en Ontwikkeling (IBRD) van de Wereldbankgroep (WBG). De Surinaamse overheid heeft het belang erkend van versterking van het wet- en regelgevingskader en de verbetering van het milieubeheer als reactie op de potentiële snelle groei van de mijnbouwsector. De voorbereiding van een Strategische Milieu- en Sociale Beoordeling (Strategic Environmental and Social Assessment, SESA) moet dienen als instrument om ervoor te zorgen dat de ontwikkeling van de mijnbouw op een duurzame manier verloopt in overeenstemming met de beste internationale milieu- en sociale praktijken en normen.

Het SESA-project maakt deel uit van het Suriname Competitiveness and Sector Diversification Project (SCSD), dat uit drie componenten bestaat: Component 1: Versterking van het bestuur, de transparantie, de verantwoordingsplicht en de administratie van de mijnbouwsector; Component 2: Investeren in kleine en middelgrote ondernemingen (kmo's) en waardeketens in doelgerichte opkomende industrieën; Component 3: Projectbeheer en -evaluatie.

SESA DOELSTELLINGEN

De SESA omvat een uitgebreid onderzoek van de potentiële effecten, zowel positief als negatief, van toekomstige potentiële investeringen in de hele mijnbouwsector en de identificatie van hiaten in de regelgeving, institutionele capaciteit en openbare raadplegingsmechanismen die moeten worden versterkt. De SESA zal helpen de zwakke punten in het huidige wet- en regelgevingskader aan te pakken en de overheid in staat stellen de beginselen van duurzame ontwikkeling te integreren, zowel stroomopwaarts in de sectorplanning als stroomafwaarts bij de voorbereiding of evaluatie van specifieke projecten.

Het verwachte resultaat van de SESA is een reeks concrete maatregelen voor de mijnbouwsector van Suriname om tegemoet te komen aan de behoeften op het gebied van milieubescherming, het de waarborging van het welzijn van de lokale bevolking, met name van inheemse en tribale gemeenschappen, en duidelijke institutionele verantwoordelijkheden vast te stellen voor de overheid, de particuliere sector en de burgermaatschappij.

De SESA zal ook bijdragen aan een transparanter begrip van milieu- en sociale regelgeving, waardoor er een gelijker speelveld ontstaat voor toekomstige particuliere investeerders en duurzame ontwikkeling.

De doelstellingen van de SESA zijn:

- Het identificeren van de sociale en milieueffecten die zouden kunnen worden gegenereerd door de ontwikkeling van de mijnbouwsector en het evalueren van de reikwijdte en waarschijnlijkheid van deze effecten als gevolg van toegenomen activiteiten in de sector en gerelateerde ontwikkeling.
- Aanbevelingen doen om deze gevolgen te vermijden, te beheersen en/of te verzachten.
- De integratie van deze maatregelen in een samenhangend beleid vergemakkelijken en de toepassing ervan waarborgen; en
- Helpen bij de capaciteitsopbouw en opleiding van de ambtenaren van de overheid in het beheer van de gevolgen van de mijnbouwsector, met name het ministerie van Natuurlijke Hulpbronnen (MNR) en het Nationaal Instituut voor Milieu en Ontwikkeling (NIMOS).

SESA METHODOLOGIE

De toegepaste methodologie in de SESA werd afgeleid van de SESA-taakomschrijving, input van het SESA-team, interactie met de GOS en Surinaamse belanghebbenden, en beste praktijken uit de mijnbouwsector. De SESA werd ontworpen als een raadgevende en participatieve methode om de institutionele capaciteit te helpen versterken en goede wereldwijde praktijken te introduceren, specifieke

hervormingsinspanningen te identificeren en te informeren. Daarnaast helpt de SESA-methode het publiek bewust te maken van de integratie van milieu- en sociale overwegingen in de mijnbouwsector met het oog op de duurzame langetermijnontwikkeling van het land in overeenstemming met het Nationale Ontwikkelingsplan. Verder draagt het bij aan waarborgde het de waarborgen van de bescherming van de

De ontwikkeling van de SESA verliep in zes fasen en 12 hoofdtaken met de bijbehorende activiteiten, zoals hieronder beschreven:

- Fase 1. Scoping van de SESA en aanzet tot rapporten, waaronder taak 1. Kick-off Call 2: Desktop Review 3: Stakeholder Mapping 4: Vaststelling van SESA doelen en doelstellingen en 5: Afronding van de consultatieve en validatie workshop en bijeenkomsten met de stakeholders;
- Fase 2. Beschrijving van het regelgevende en institutionele kader van de GOS-capaciteit voor milieu-, sociale en arbobeoordeling en -beheer met taak 6. Het beoordelen van het institutionele, wettelijke en regelgevende kader en de vereiste capaciteitsbeoordeling van GOS;
- Fase 3. Identificatie van de algemene, strategische en sociale gevolgen die voortvloeien uit de voorspelde toekomstige ontwikkeling van de mijnbouw met Taak 7 Het uitvoeren van een analyse van toekomstige ontwikkelingen in de mijnbouw en de gevolgen daarvan voor het milieu en de maatschappij;
- Fase 4. Voorgestelde mitigatie- en controlemaatregelen met taak 8, die vereist dat RINA mitigatiemaatregelen voorlegt, inclusief indicatoren voor monitoring en evaluatie;
- Fase 5. Formulering van aanbevelingen en het SESA-actieplan waar in Taak 9, RINA het SESA-actieplan ontwikkelde op basis van de uitgevoerde analyse en de ontwikkelde aanbevelingen;
- Fase 6. Het laatste overleg, de beoordeling en de goedkeuring omvatten taak 11, waarmee het definitieve SESA-rapport en het bijbehorende actieplan kunnen worden opgesteld op basis van de input die tijdens de validatie is ontvangen;
- Gelijktijdige fase - Capaciteitsopbouw en adviesdiensten omvat taak 12 voor capaciteitsopbouw en adviesdiensten gericht op het bijstaan van de overheid, personeel van de MNR, het Mineraleninstituut, NIMOS en andere relevante ministeries, waaronder het ministerie van Financiën, bij het opbouwen van de vereiste technische vaardigheden en managementcapaciteiten om de mijnbouwsector in het land te reguleren en te controleren.

BELANGRIJKSTE BEVINDINGEN

De belangrijkste bevindingen van de SESA zijn als volgt:

Institutionele capaciteit;

- Er is een gebrek aan duidelijk gedefinieerde rollen en verantwoordelijkheden voor het monitoren van sociale en milieueffecten in de mijnbouwsector.
- Uit de beoordeling van de institutionele capaciteit van het MNR bleek dat verschillende sectoren versterkt moeten worden om een goede uitvoering van het regelgevingskader te garanderen.
- Het huidige NIMOS heeft een zwakke institutionele capaciteit en moet dringend worden versterkt om zijn wettelijke taken en verantwoordelijkheden als NMA te kunnen uitvoeren.
- De overheid beschikt momenteel over onvoldoende middelen om het toezicht op en de evaluatie van mijnbouwprojecten te waarborgen.

Wettelijk en regelgevend kader

- De verantwoordelijkheid voor de uitvoering van de SESA moet worden gegeven aan de belangrijkste autoriteit met betrekking tot de mijnbouwsector; in dit geval het MNR.
- Het wet- en regelgevingskader ontbeert specificiteit, richtlijnen en wettelijke limieten voor lozingen en emissies voor mijnbouwactiviteiten. Er zijn duidelijke normen en controlestrategieën nodig om de handhaving te garanderen.
- Momenteel wordt er zonder onderscheid gebruik gemaakt van kwik en andere giftige stoffen, met name in de goudmijnbouw.
- Mijnbouwcontracten zijn niet gestandaardiseerd en daarom niet transparant.
- Suriname heeft geen uitgebreid klachtenmechanisme op nationaal niveau dat alle sectoren omvat.
- Veel ASM-arbeiders zijn niet geformaliseerd en werken vaak illegaal. De overheid heeft beperkte capaciteiten en middelen om de negatieve milieu- en sociale gevolgen van ASM aan te pakken.

Milieubescherming en risicobeperkende maatregelen

- Vooruitlopend op de invoering van de Kaderwet Milieubeheer heeft het NIMOS in 2005 richtlijnen gepubliceerd voor milieu- en sociale effectbeoordelingen en in de jaren daarna specifieke richtlijnen. Op basis van deze richtlijnen beheert NIMOS sinds 2005 de uitvoering van ESIA's.
- De NMA is de opvolger van het NIMOS, dat overgaat in de NMA, maar ten tijde van dit actieplan is de NMA nog niet operationeel.
- Mitigerende maatregelen moeten worden gecontroleerd om hun effectiviteit te verifiëren en ze aan te passen in geval van inefficiëntie.
- Er is geen nationale capaciteit om te reageren op ongevallen of andere noodsituaties.
- Er zijn momenteel geen lozings- of emissienormen in Suriname. IFC beveelt standaarden aan die soms worden gebruikt.
- De GOS heeft momenteel geen gestructureerd en gereguleerd systeem voor afval- en afvalwaterbeheer.
- Het huidige regelgevingskader vereist niet dat mijnbouwbedrijven voorzieningen treffen in geval van milieu- of sociale schade.
- Mijnbouwbedrijven hebben niet altijd een post-closure plan

Publieksparticipatie en het delen van informatie

- Gemeenschappen, met name inheemse en in stamverband levende mensen, zeggen dat ze niet van tevoren worden geïnformeerd over mijnbouwprojecten en achteraf met de situatie worden geconfronteerd.
- Er wordt momenteel weinig informatie uitgewisseld tussen de GOS en belanghebbenden; de GOS beschikt over veel informatie die niet gepubliceerd en niet bijgewerkt wordt, zoals blijkt uit de GONINI-website.
- Er zijn weinig programma's voor capaciteitsopbouw beschikbaar om mijnwerkers te informeren en op te leiden over alternatieve mijnbouwmethoden, formalisering van ASM en andere mijnbouwgerelateerde zaken.
- Er zijn momenteel beperkte mogelijkheden om inkomsten te genereren in de mijnbouw voor mensen die in mijnbouwgemeenschappen wonen, waar werknemers bij voorrang uit de lokale gemeenschap moeten worden gekozen.

- De internationale verdragen en mensenrechtenverklaringen die Suriname heeft geratificeerd en mede heeft ondertekend, hebben nog steeds niet geleid tot de noodzakelijke wetgeving voor de erkenning, het respect en de bescherming van de rechten van inheemse en tribale volken, zelfs niet ondanks de uitspraak van het Inter-Amerikaanse Hof voor de Rechten van de Mens in 2015 en vele internationale aanmaningen.
- Beschermde gebieden zijn binnengedrongen door mijnbouwactiviteiten die het milieu, de biodiversiteit en cultureel erfgoed aantasten en een bedreiging vormen voor beschermde gebieden.
- In de Surinaamse wet- en regelgeving zijn geen expliciete mechanismen opgenomen voor het delen van baten met de getroffen bevolking. Tegelijkertijd beweren gemeenschappen dat ze geen enkele compensatie ontvangen voor de mijnbouwactiviteiten op hun grondgebied.

SESA ACTIEPLAN

Op basis van de analyse werd een reeks aanbevelingen ontwikkeld en een actie- en implementatieplan met bijbehorende activiteiten voorgesteld. De prioriteiten werden onderverdeeld in korte termijn (ST binnen 1 tot 2 jaar), middellange termijn (MT binnen 3 tot 4 jaar) en lange termijn (LT binnen 5 tot 7 jaar), een tijdsbestek dat zal variëren afhankelijk van de keuze voor het basisscenario of het versnelde scenario. De strategische beleidsaanbevelingen en hun uitvoeringstermijn zijn:

Aanbevelingen voor prioritaire acties op korte termijn

- R1 De regelgevende instellingen, hun wettelijke kaders en handhavingsmechanismen versterken.
- R2 De dagelijkse werking van het MNR versterken om een gepast en efficiënt beheer te garanderen.
- R3 De institutionele capaciteit van NIMOS versterken.
- R5 Bevestig het MNR als het agentschap voor de uitvoering van de SESA.
- R6 De mijnbouwwet wijzigen en formaliseren om dubbelzinnigheden, vaagheid en ministeriële willekeur weg te nemen.
- R8 Standaardiseer mijnbouwcontracten met middelgrote en grote bedrijven.
- R9 De toepassing van het klachtenmechanisme ondersteunen om zorgen en klachten met betrekking tot mijnbouwactiviteiten aan te pakken
- R11 Erken inheemse en in stamverband levende volken als een collectieve gemeenschap en juridische entiteit om hun rechten te waarborgen.
- R12 Versterk de regelgeving met betrekking tot de MEB- en ESIA-processen.
- R20 Verbeteren van openbare raadpleging, betrokkenheid van de gemeenschappen en belanghebbenden.
- R21 Voorzie in vrijheid van informatie met open toegang tot geografische informatie en gegevens van de mijnbouwsector.
- R24 Rken kwetsbaar, cultureel erfgoed en beschermde gebieden als no-go-gebieden voor mijnbouwactiviteiten.

Actieaanbevelingen voor de middellange termijn

- R4 Sterk de controle- en evaluatiecapaciteit van het personeel van overheidsinstanties.
- R13 Oprichting van het Nationaal Milieuagentschap (NMA) om de naleving van milieuwetgeving te vergemakkelijken.

- R14 Prioriteer milieubescherming met verzachtende en controlemaatregelen.
- R15 Een alomvattende aanpak implementeren voor de preventie van en reactie op mijnbouwongevallen.
- R16 Eenduidige lozings- en emissiegrenswaarden vaststellen.
- R18 Voorschriften voor aansprakelijkheid voor milieuschade en sociale schade vaststellen voor mijnbouwactiviteiten.
- R19 Implementeer goed geplande mijnsluitingen en landgebruik na sluiting om de milieu-integriteit te herstellen en het welzijn van gemeenschappen te garanderen.
- R22 Investeer in capaciteitsopbouw en bewustmaking van mijnbouwbedrijven en mijnwerkers.
- R23 Schep werkgelegenheid in de mijnbouw.
- R25 Transparantie en verantwoording bevorderen met betrekking tot de sociale verdeling van voordelen.

Actieaanbevelingen voor de lange termijn

- R7 Beperk het gebruik van giftige stoffen in de mijnbouw.
- R10 Zelfstandigen en integreren in de sociaaleconomische activiteiten van het land om de risico's van de informele economie te beperken en de arbeidsomstandigheden te verbeteren.
- R17 Bevorder het circulaire economie model door hergebruik en recycling van water en afval.

1 PROJECT BACKGROUND

1.1 BACKGROUND AND CONTEXT

RINA Consulting, Inc. (RINA) has been retained by the Ministry of Natural Resources (MNR) of the Government of Suriname (GOS) to conduct a Strategic Environmental and Social Assessment (SESA) of the Mining Sector financed by the World Bank Group's (WBG). The GOS has recognized the importance of strengthening the legal and regulatory framework and improving environmental governance in response to the potential rapid growth of the mining sector. The SESA process implies an evaluation at a strategic level for the general environmental and social consequences resulting from the implementation of a certain plan, program or policy (such as a policy for the development of the mining sector in Suriname).

The Strategic Environmental and Social Assessment (SESA) is to serve as a tool to help ensure that mining development proceeds in a sustainable manner in accordance with the best international environmental and social practice and standards and in alignment with the long-term sustainability goals of the National Development Plan. The SESA focuses on Large-scale gold mining (LSGM), artisanal small-scale gold mining (ASGM) and Bauxite

The SESA project is part of the Suriname Competitiveness and Sector Diversification Project (SCSD). The SCSD project consists of three components:

- ✓ Component 1: Strengthening the mining sector governance, transparency, accountability, and administration;
- ✓ Component 2: Investing in Small and medium-sized enterprises (SMEs) and value chains in targeted emerging industries;
- ✓ Component 3: Project management and evaluation.

The first component of the SCSD project (SCSD - C1) is focused on technical assistance and seeks to specifically strengthen the mining sector governance, transparency, accountability, and administration. This component focuses on supporting improvements to the legal, regulatory, and institutional framework governing mining in Suriname. The purpose is to improve social and environmental impact management and to align Suriname's framework to international best practice by providing its institutions with knowledge and tools to carry out their mandated functions. Specific activities planned in the SCSD, in addition to the development of the SESA, include the following:

1. Strengthening the legal, regulatory, and institutional frameworks governing the mining sector through support towards the revision of relevant legislation and regulations and the establishment of the Minerals Institute.
2. Sector administration capacity building to assist the GOS, in particular staff from the MNR, the Minerals Institute, and other relevant ministries including the Ministry of Finance, to build the required technical skills and managerial capabilities to regulate and monitor the mining sector.
3. Strengthening revenue assessment, collection, and forecasting.
4. Building independent oversight capacity and stakeholder consultation mechanisms, by providing support to non-state actors involved in the EITI process in Suriname (including Indigenous and tribal peoples' representatives, non-governmental organizations, community-based organizations, technical experts, and other civil society representatives) to strengthen their participation in increasing transparency and disclosure in the mining industry.
5. Enhancing environmental, health, and social performance of the mining sector, including:

1.2 OBJECTIVES

The SESA comprises a comprehensive mining sector-wide examination of potential environmental and social impacts, both positive and negative, of future potential investments in the sector. Through addressing weaknesses in the current legal, regulatory and institutional framework it is intended to enable the GOS, and especially the MNR, to integrate principles of sustainable development both upstream in sector planning efforts and downstream when specific projects are being prepared or evaluated.

The SESA is also to contribute to a better understanding of environmental and social regulations, creating a more level playing field for future private investors.

As defined in the ToRs, the objectives of the SESA are:

- ✓ To identify the social and environmental impacts that could be generated by the development of the mining sector and evaluate the scope and likelihood of these impacts due to increased activities in the sector;
- ✓ To put forward measures to avoid, manage and/or attenuate these impacts;
- ✓ To facilitate the integration of these measures into a coherent policy and ensure their application; and
- ✓ To help in capacity building and training of GOS officials in the management of mining sector impacts, in particular within the Ministry of Natural Resources (MNR) and the National Institute for Environment and Development (NIMOS).

1.3 VISION FOR SUSTAINABLE MANAGEMENT OF SURINAME MINING SECTOR

Because this SESA concerns the mining sector and requires a strategic look at environmental and social aspects, the MNR and NIMOS were particularly important in providing governmental guidance, advice and inputs to the expert team that carried out the SESA.

The SESA is to provide guidance to the MNR and NIMOS on systematically integrating environmental, social, socio-economic, health and safety concerns in policy, regulation and planning, project development, operations, maintenance, and decommissioning of mining sector activities.

The SESA should serve as a catalyst for the following outcomes:

- ✓ Increased attention to environmental, Indigenous and tribal community engagement, labor and resettlement, health, safety and security priorities associated with mining and development resulting in more responsible mining operations;
- ✓ Strengthened environmental constituencies;
- ✓ Improved social accountability by making the mining policy process more transparent, especially related to Indigenous and tribal communities; and
- ✓ Enhanced sector capacity for managing environmental, health, safety and socio-political risks associated with the development and operation of the mining sector.

Furthermore, the SESA is to provide a reference for cumulative environmental and social effects with other ongoing and future sector programs and plans through the review of environmental and social impacts associated with the mining sector. The SESA is to ensure that the concerns and expectations of different stakeholders are taken into account in the decision-making process for equity and sustainable development of Suriname's mining sector.

1.4 PROJECT TEAM

The core SESA Team consists of the following RINA specialists:

- ✓ Julie Evans - SESA Team Leader / EHS Specialist/Contract Administrator

- ✓ Johanne Hanko - Project Coordinator and Senior Social and Gender Specialist
- ✓ Pedro Bastidas - Capacity Building Coordinator
- ✓ Salomon Emanuels - Local coordinator/ Public Participation Expert
- ✓ Anthony Sanford - Senior Mining Specialist
- ✓ Nancy del Prado - Local Institutional Assessment and Suriname regulatory framework specialist
- ✓ Ana Maria Aranibar - Artisanal Small Mining Expert
- ✓ Jose Villamizar - Senior Environmental Specialist
- ✓ Antonella Castillo - Natural Resources Economist
- ✓ Carla Lino - GIS Specialist

1.5 SESA METHODOLOGY

A number of underlying key assumptions were made at the initiation of the SESA process as follows:

- Strategic environmental assessment is not a product or report, but a process with defined outputs throughout. Although a report on the results has been produced, the implementation and follow-up of SESA recommendations are critical to the success of its adoption by the GOS.
- While the SESA has been led by the project team, it is an interactive process with stakeholder engagement and involvement in key decisions throughout its development. The contribution of key Suriname counterparts formed an important input in the development of the SESA.

The methodology employed in the SESA process was derived from the TOR and from best and good SEA practice references (Dalal-Clayton and Sadler 2005);[1] (OECD 2006)[2]; (Partidário 2007; Partidário n.d.)[3] and RINA's experience implementing similar projects.

The overall SESA study contains three main components:

- ✓ A technical component underpinning the definition of objectives, targets, and indicators, which identify the relevant studies for each of the critical factors for decision-making, allowing necessary and sufficient information to be collected from within the available data.
- ✓ A process component that ensures the linking of a SEA process and the decision-making, planning, and programming processes, establishing the governance rules for the integration of the processes. This articulation between a SEA process and the strategic decision-making processes is what makes the SEA a flexible process adaptable to each scenario.
- ✓ A communication process, which is crucial for public participation and involvement, which assures the exchange of information and the cross-referencing of the multiple perspectives, the opinion making, an integrated vision and participative processes suited to the problem and to the critical decision moments. The communication component is adjusted to the characteristics of the target groups.

The methodology was designed to be consultative and participatory to strengthen institutional capacity, introduce good global practices, identify and inform specific reform efforts, and raise public awareness to integrate environmental and social concerns into the mining sector, as to develop the country's long-term sustainable development and in alignment with the NDP.

[1] https://www.tandfonline.com/doi/pdf/10.1080/14615517.2017.1322811?needAccess=true

[2] https://www.oecd-ilibrary.org/development/applying-strategic-environmental-assessment_9789264026582-en

[3] http://content-ext.undp.org/aplaws_publications/1703425/SEA_guide_Portugal.pdf

The methodology ensured the safeguards for the protection of Indigenous and Maroon Peoples' rights, and their fair and transparent consultation and participation in the SESA in line with the ITPPF and the Indigenous and Tribal People the FPIC procedures.

The SESA is to be used as a process of sector institutional and governance strengthening that materializes along with the implementation of mining sector reforms. The development of the SESA followed 6 main stages and 12 main tasks. The general approach used is presented in Figure 1.1

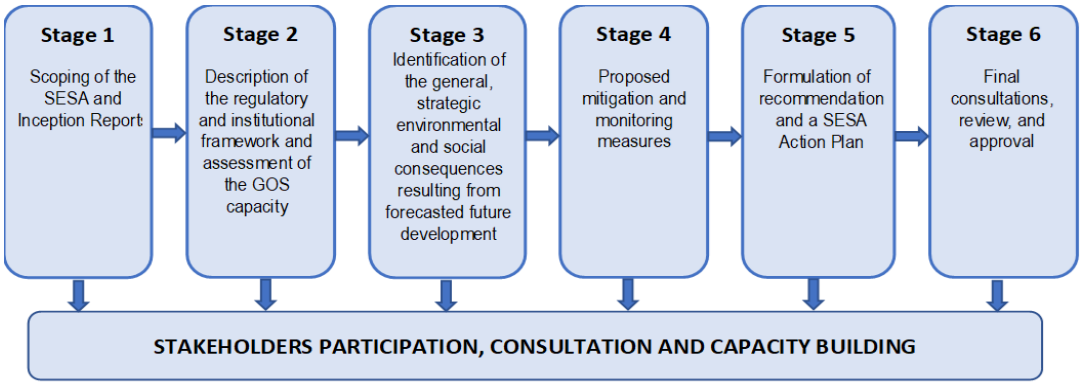


Figure 1.1: Technical Approach and Methodology

Source: RINA 2022

STAGE 1. Scoping of the SESA and Inception Reports

The main objective of this stage was to set up the context for the SESA with extensive and substantial stakeholder inputs. The scoping was to be validated by stakeholders through a validation workshop. This stage was comprised of the following tasks:

TASK 1 A kick-off call was held virtually on Friday, September 02, 2022. The objective of the Kick-off call was to introduce the team, set up the communication protocol and the dates for the first site visit.

TASK 2 Desktop review was to assemble preliminary information relevant to the scope of the SESA applicable to the mining sector.

TASK 3 Confirm the stakeholder mapping, stakeholders that had been preliminarily identified during the Inception report.

TASK 4 Identify a series of questions and corresponding desired outcomes related to sustainable mining development.

TASK 5 Ensure the participation of all stakeholders through consultative and validation workshops and meetings.

STAGE 2. Description of the regulatory and institutional framework of the GOS capacity for environmental, social and occupation health and safety assessment and management

TASK 6 Review the Institutional, Legal and Regulatory Framework and required a capacity assessment of GOS.

STAGE 3. Identification of the general, strategic and social consequences resulting from forecasted future development of mining

TASK 7, Conduct an analysis of future developments in mining and its environmental and social consequences. To achieve this, RINA:

STAGE 4. Proposed mitigation and monitoring measures

TASK 8 Require RINA to submit Mitigation Measures Including Indicators for Monitoring and Evaluation.

STAGE 5. Formulation of recommendations and a SESA action plan

TASK 9 Develop the SESA Action Plan, based on the analysis conducted, and the recommendations formulated, which is to serve as a tool to facilitate the implementation of the SESA. Priorities were structured into immediate, short-term (1-2 years) and medium-term (3-5 years), including an Action Plan for its implementation.

TASK 10 Conduct the National Consultative Workshop and Validation of SESA Action Plan and Report. This second workshop was to present the SESA's main findings and recommendations, record and address doubts, concerns and recommendations, and validate the report with the stakeholders. This workshop was held August 10 and 11 2023.

STAGE 6. Final consultations, review and approval

TASK 11 Prepare the Final Report. The final SESA report and Action Plan will be prepared and include the Stakeholder Consultation Report, the Policy Matrix, recommendations, implementation and monitoring plans with indicators and institutional arrangements. RINA is available on request to advise on the environmental, social, occupational health and safety implications of any policy and/or regulatory measure proposed as part of the SESA.

CONCURRENT STAGE - Capacity building and advisory services

TASK 12 Conduct capacity building and advisory services aimed to assist the GOS, staff from the MNR, the Minerals Institute, NIMOS and other relevant ministries including the Ministry of Finance, to build the required technical skills and managerial capabilities to regulate and monitor the mining sector in the country. The specific objective was to transfer knowledge on SESA for the mining sector to the implementing ministries, associated agencies, and other GOS officials as appropriate.

1.6 REPORTING

Coherent and consistent environmental data should be collected and analyzed by the designated technical team. The MNR should be responsible for the following:

- ✓ To present an annual report with monitoring results;
- ✓ To inform other institutions and stakeholders (e.g., NEMOS, NIMOS, ROM Ministry of Finance, Ministry of Regional Development and Sports and other key ministries) regarding the monitoring outcomes;
- ✓ To coordinate the review, comments and observations of the reports;
- ✓ And, if or when required, to propose corrective measures that will improve the implementation of mitigation measures with the competent authorities.

1.7 ORGANIZATION OF THE SESA REPORT

The SESA report includes a high volume of information presented in the SESA, as it integrates all the findings of the SESA process. The SESA report is structured as follows:

- Chapter 1 introduces the project background and the SESA objectives and methodology and presents the trend scenarios.
- Chapter 2 shows the Critical Environmental and Social Impacts and risks.
- Chapter 3 describes the proposed mitigations and monitoring measures for E&S impacts.
- Chapter 4 presents Key SESA Findings.
- Chapter 5 explains the SESA implementation and Action Plan.
- Chapter 6 lists the references used to prepare the SESA.

Additionally, the report includes a series of appendices that give additional information relevant to the SESA report including all the previously presented reports submitted during the SESA process, information and data that was used as the basis for the preparation of the SESA report.

All findings during the SESA process can be found in detail in the previously prepared reports found in the appendices.

1.8 PUBLIC CONSULTATION THROUGHOUT THE SESA

Regular consultations with the stakeholders were held throughout the SESA process. During the development of the Inception Report, stakeholders were identified in collaboration with MNR. Key stakeholders include government authorities such as MNR, NIMOS, MRDS, donor agencies, local and international NGOs, CSOs, private companies, mining companies, and mining communities with special attention to Indigenous and tribal people and communities involved in mining. The stakeholders for the project involved various sectors from individuals to private and public sectors. These included: ASM workers, miners working for large companies, the mining companies, NGO / CSO / Associations / foundations / traditional authorities, donor organizations, development aid, financial assistance, international organization agencies and Suriname government organizations.

Consultation with stakeholders was carried out through workshops, visits to the communities, emails and WhatsApp. Table 1.1 shows the consultation dates, the stakeholders that participated in the consultation, the location or means of consultation and the purpose of the consultation. The minutes of the public consultation with stakeholders including the number and names of participants can be found in Appendix B for the validation of the Scoping report and Appendix C 5 for the validation of the Draft SESA Report.

Table 1.1 Public consultation with stakeholders

No.	Consultation date	Stakeholder	Means of consultation	Purpose of consultation	No. of participants
1	October 07, 2022	WB and MNR.	Email	Review for comments of the Inception report.	Designated authorities
2	October 20, 2022	WB and MNR.	Email	Review for comments of the Scoping report.	Designated authorities
3	October 25, 2022	MNR.	Meeting with MNR authorities in Paramaribo.	Introduction of the RINA team. Final logistics for site visits and workshop. Meeting with Government PIU. Presentation of PPT to be shown to stakeholders.	3
4	October 26, 2022	Ministry of Regional Development and Sports.	Visit at office of the Ministry of Regional Development and Sports in Paramaribo.	Presentation of the SESA project. Recollection of information on the situation on the social and Indigenous and tribal communities in Suriname	1
5	October 26, 2022	Bauxite institute.	Visit at office the Bauxite Institute in Paramaribo.	Presentation of the SESA study.	2

No.	Consultation date	Stakeholder	Means of consultation	Purpose of consultation	No. of participants
				Recollection of information on the situation of bauxite in Suriname.	
6	October 26, 2022	Wayana Indigenous peoples' authorities and representatives of the community	Visit to the representative office Mulokot Foundation Direct conversation with authorities and 2 authorities and community members	Presentation of the SESA study. And validation of the Scoping report Recollection of local information.	4
7	October 27, 2022	Njuka (Aucaners/Aukanisi) Maroon tribe authorities and representatives of the community	Visit to New Koffiekamp community Direct conversation with the community Captain.	Presentation of the SESA study. And validation of the Scoping report Recollection of local information.	8
8	October 29, 2022	Paramaka Maroon tribe authorities and representatives of the community	Visit to Langatabbetje community Direct conversation with 10 authorities and community members.	Presentation of the SESA study. And validation of the Scoping report Recollection of local information.	20
9	October 31, 2022	Njuka (Aucaners/Aukanisi) Maroon tribe authorities and representatives of the community	Visit to Adjoema Kondre community Direct conversation with 3 authorities and community members.	Presentation of the SESA study. And validation of the Scoping report Recollection of local information.	3
10	October 31, 2022	Njuka (Aucaners/Aukanisi) Maroon tribe authorities and representatives of the community	Meeting with Kawina community authorities and community members from Jaffa, Peninica, and Gododrai Direct conversation with 5 authorities and community members	Presentation of the SESA study. And validation of the Scoping report Recollection of local information.	11

No.	Consultation date	Stakeholder	Means of consultation	Purpose of consultation	No. of participants
11	October 31, 2022	Kaliña and Lokono Indigenous peoples' authorities and representatives of the community	Visit to Kaliña & Lokono Inheemsen beneden Marowijne (KLIM), Erowarte community Direct conversation with 2 KLIM authorities and community representatives	Presentation of the SESA study. And validation of the Scoping report Recollection of local information.	4
12	November 01, 2022	Matawai Maroon tribe authorities and representatives of the community	Visit to New Jacobkondre community Direct conversation with 4 community representatives.	Presentation of the SESA study. And validation of the Scoping report Recollection of local information.	21
13	November 01, 2022	Saamaka Maroon tribe authorities and representatives of the community	Visit to Balingsoela community Direct conversation with 2 authorities and community members.	Presentation of the SESA study. And validation of the Scoping report Recollection of local information.	2
14	November 01, 2022	Aukanisi Maroon tribe authorities and representatives	Meeting with Aukanisi Maroon tribe, Compagnie Kreek community Direct conversation with 7 authorities and community members.	Presentation of the SESA study. And validation of the Scoping report Recollection of local information.	11
15	November 02, 2022	Donor organizations, development aid, financial assistance, international organizations agencies.	Workshop in Paramaribo. Direct conversation.	Presentation of the SESA project and Validation of the Scoping report.	13
16	November 02, 2022	NGO / CSO / Associations / foundations / traditional authorities.	Workshop in Paramaribo Direct conversation	Presentation of the SESA project and Validation of the Scoping report.	18

No.	Consultation date	Stakeholder	Means of consultation	Purpose of consultation	No. of participants
17	November 03, 2022	Government organizations, mining and private companies.	Workshop in Paramaribo. Direct conversation.	Presentation of the SESA project and Validation of the Scoping report.	31
18	November 03, 2022	MNR, NIMOS, Newmont.	Workshop for capacity building.	Capacity building on mining, GIS and ASM.	28
19	November 18, 2022	Bauxite Institute Newmont mining. NIMOS. Suriname Environmental and Mining Foundation – SEMIF. Participants of all the workshops.	Email.	Review for comments of the scoping report.	Designated authorities
20	February 28, 2023	WB and MNR.	Email.	Review for comments of the Regulatory framework and Institutional capacity report.	Designated authorities
21	March 10, 2023	All stakeholders and public.	MNR Website. https://gov.sr/wp-content/uploads/2023/03/Scoping-Report-FINAL-Incl-Appendix.pdf.	Publication online of the Scoping and Inception reports.	Online with unlimited number
22	March 23, 2023	Participants of all the workshops.	Email.	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website. Review for comments of the Regulatory framework and Institutional Assessment.	43
23	March 28, 2023	Association of Saramacca Traditional Leaders (VSG)	WhatsApp Participation in Workshop	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website.	9

No.	Consultation date	Stakeholder	Means of consultation	Purpose of consultation	No. of participants
				Review for comments of the Regulatory framework and Institutional Assessment.	
24	March 28, 2023	Foundation for Sustainable Development of Pamaka (Pamaka Communities)	WhatsApp	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website. Review for comments of the Regulatory framework and Institutional Assessment.	Institutional authorities for sharing with community members
25	March 28, 2023	Mulokot Foundation Wayana Indigenous population	WhatsApp	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website. Review for comments of the Regulatory framework and Institutional Assessment.	Institutional authorities for sharing with community members
26	March 28, 2023	New Koffiekamp community, Njuka (Aucaners/Aukanisi) Maroon tribe	WhatsApp	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website. Review for comments of the Regulatory framework and Institutional Assessment.	Institutional authorities for sharing with community members
27	March 28, 2023	Erowarte community, Kaliña and Lokono Indigenous peoples.	WhatsApp	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website. Review for comments of the Regulatory framework and Institutional Assessment.	Institutional authorities for sharing with community members
28	March 28, 2023	Langatabbetje community, Paramaka Maroon tribe.	WhatsApp	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website.	Institutional authorities for sharing with community members

No.	Consultation date	Stakeholder	Means of consultation	Purpose of consultation	No. of participants
				Review for comments of the Regulatory framework and Institutional Assessment.	
29	March 28, 2023	Kawina community authorities and community members from Jaffa, Peninica, and Gododrai, Njuka (Aucaners/Aukanisi) Maroon tribe.	WhatsApp	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website. Review for comments of the Regulatory framework and Institutional Assessment.	Institutional authorities for sharing with community members
30	March 28, 2023	Matawai Community (Nieuw Jacobkondre, Misalibi, Baling and Bilawatra)	WhatsApp	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website. Review for comments of the Regulatory framework and Institutional Assessment.	Institutional authorities for sharing with community members
31	March 28, 2023	Association of Traditional Indigenous Leaders (VIDS)	Email	Update on the development of the SESA. Notification on the link to access the Scoping report available on the MNR website. Review for comments of the Regulatory framework and Institutional Assessment.	Institutional authorities for sharing with community members
32	April 28, 2023	WB and MNR.	Email.	Review for comments of the Environmental and social impacts and mitigation measures report.	Institutional authorities for sharing with community members
33	May 23, 2023	MNR, NIMOS, BS	Workshop for capacity building online.	Capacity building on SESA study for the mining sector and IFC Performance Standards.	25
34	Aug 03, 2023	Travel to Matawai Maroons – Nieuw Jacobkondre	Meeting with authorities and members of the community	Update on the development of the SESA. Validation of the SESA Draft Report	17

No.	Consultation date	Stakeholder	Means of consultation	Purpose of consultation	No. of participants
		Meeting with traditional authorities and community members of Misalibi, Nieuw Jacobkondre and Baling			
35	Aug 04, 2023	Meeting with Traditional Authorities and community members New Koffiekamp	Meeting with authorities and members of the community	Update on the development of the SESA. Validation of the SESA Draft Report	7
36	Aug 04, 2023	Meeting with Traditional Authorities and community members of Compagnie Kreek	Meeting with authorities and members of the community	Update on the development of the SESA. Validation of the SESA Draft Report	4
37	Aug 05, 2023	Travel by car to Pamaka Maroon at Langatabiki Meeting with Traditional Authority and community members	Meeting with authorities and members of the community	Update on the development of the SESA. Validation of the SESA Draft Report	10
38	Aug 05, 2023	Meeting with Kawina Indigenous community	Meeting with authorities and members of the community	Update on the development of the SESA. Validation of the SESA Draft Report	6
39	Aug 06, 2023	Travel to by car Indigenous and Maroon communities of Marowijne district (Erowarte). Meetings with KLIM (Kaliña/Lokono) at Erowarte	Meeting with authorities and members of the community	Update on the development of the SESA. Validation of the SESA Draft Report	2
40	Aug 07, 2023	Meeting with Mulokot Foundation	Meeting with authorities and	Update on the development of the SESA.	2

No.	Consultation date	Stakeholder	Means of consultation	Purpose of consultation	No. of participants
		(Wayana) in Paramaribo Location: Mulokot Office	members of the community	Review of maps to be used in the SESA report	
41	Aug 07, 2023	Meeting with VSG Location: VSG office	Meeting with authorities and members of the community	Update on the development of the SESA. Review of maps to be used in the SESA report	9
42	Aug 08, 2023	Meeting with Ministry of Rural Development and Sports	Meeting with the Director of the Ministry and 2 staff members	Update on the development of the SESA. Review of maps to be used in the SESA report	3
43	Aug 09, 2023	Celebration of Indigenous People Rights Day – National Holiday	Visit to the Indigenous representatives	Better understand the culture of the Indigenous Communities.	32
44	Aug 10, 2023	Workshop in Paramaribo for Mining companies and private organizations.	Meeting with participants from mining companies	Update on the development of the SESA. Validation of the SESA Draft Report	4
45	Aug 10, 2023	Workshop in Paramaribo for MNR and other Suriname Government organizations	Meeting with MNR and other government organizations	Update on the development of the SESA. Validation of the SESA Draft Report	5
46	Aug 11, 2023	Workshop in Paramaribo for donor organizations, development aid, United Nations agencies, financial institutions and international organizations.	Meeting with donor agencies and international organizations participating	Update on the development of the SESA. Validation of the SESA Draft Report	6
47	Aug 11, 2023	Workshop in Paramaribo for NGOs, CFOs,	Meeting with traditional	Update on the development of the SESA.	8

No.	Consultation date	Stakeholder	Means of consultation	Purpose of consultation	No. of participants
		Traditional Authorities of Indigenous and Tribal People	authorities' representatives	Validation of the SESA Draft Report	
48	Nov 3, 2023	MNR, NIMOS, BS, GONINI	Workshop for capacity building online.	Capacity building on GIS applied to the mining sector	16
49	Nov 21, 2023	MNR, NIMOS, BS	Workshop for capacity building online.	Capacity building on Mining Impacts and their management, and Stakeholder engagement Plan	19
50	Nov 22, 2023	MNR, NIMOS, BS	Workshop for capacity building online.	Capacity building on World Bank ESF overview, and SESA Implementation	13

Source. RINA, 2023

The purpose of the Stakeholder consultation was to ensure a consistent, comprehensive and coordinated development of the SESA by devising a systematic approach to ensure expectations, interests, decisions, risk/issues and project progress through effective communication, information dissemination and decision making, at the right time, in the most efficient and effective manner. Continuous consultations not only aimed to build and maintain relationships, but also allowed the gathering of precious information for a better understand of the mining sector in Suriname, the needs of the stakeholders, and the dissemination of information regarding the SESA project. The process was inclusive of all stakeholders from private or public sectors, and at all levels, including but not limited to Indigenous and tribal peoples, venders, women, youths, local leaders, government and non-government organizations, mining companies, etc.

1.8.1 IP approach

It was important to meet the Indigenous and tribal community members in their own community, to better understand their situation and views for their future development. Consequently, we arranged visits in some communities to speak directly with the people and their representatives to present our findings and views regarding the mining development in Suriname. Figures 1.2 and 1.3 show maps that were developed by the Amazon Conservation Team (ACT) through a participatory mapping process[4]. Nevertheless, these maps show that most of the gold mining activities are located in the Maroon communities, mainly Matawai, Saramaka, Paramaka and Aukan, all of which were visited and where community members participated in the discussions during the stakeholder engagement process. Maroon people are very much involved in mining activities.

[4] The source of the maps is from Hansen/UMD/Google/USGS/NASA (gold mining), Amazon Conservation Team (tribal territories which mentions that these are approximations of territory based on their cultural mapping data. Note should be made that a document published by The Amazon Conservation Team (2010) page 4 clearly mentions that VDG and VIDS did not participate in the mapping as they did not agree on the participatory mapping process.

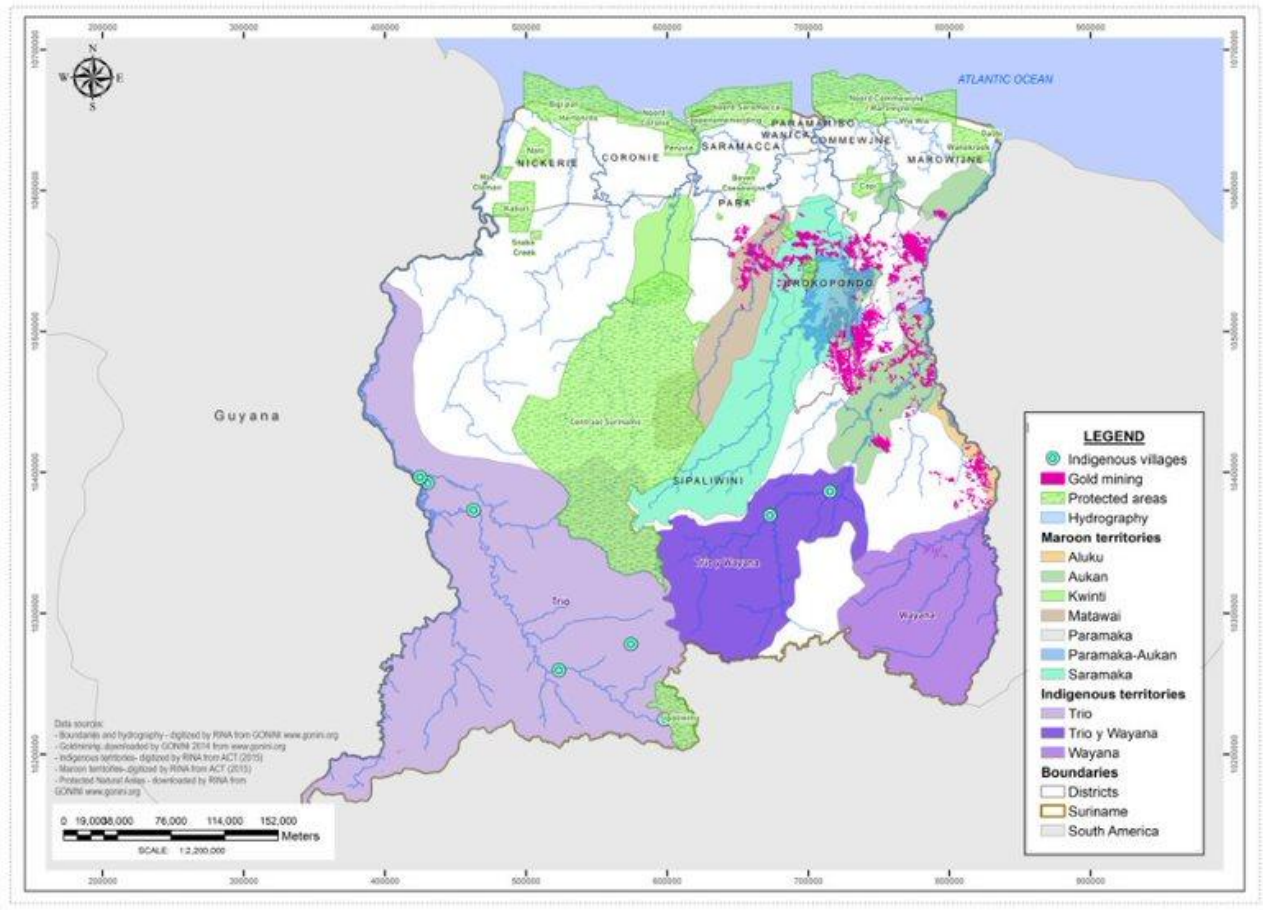


Figure 1.2: Maroon Communities in Suriname as mapped by ACT

Source: ACT, 2015.

It should be noted that there is a significant difference between Indigenous and tribal communities in terms of their involvement in mining activities. Maroon people are very much involved in mining activities whereas Indigenous peoples (IPs) are generally not directly involved in mining activities. IPs may be directly or indirectly affected because mining activities occur on their land while they often provide various services and goods to the miners and the mining companies. The Wayana, Kaliña and Lokono Indigenous peoples were consulted during the SESA process. Detailed inputs can be found in Appendices C of this report.

The following map was developed by Kambel as part of a Report commissioned by the Association of Indigenous Village Leaders in Suriname ((De Vereniging van Inheemse Dorpshoofden in Suriname VIDS) regarding the “Mining, infrastructure and the rights of Indigenous and tribal peoples in Southeast Suriname.” The map shows the location of the various Indigenous and tribal communities in Suriname marked in green.

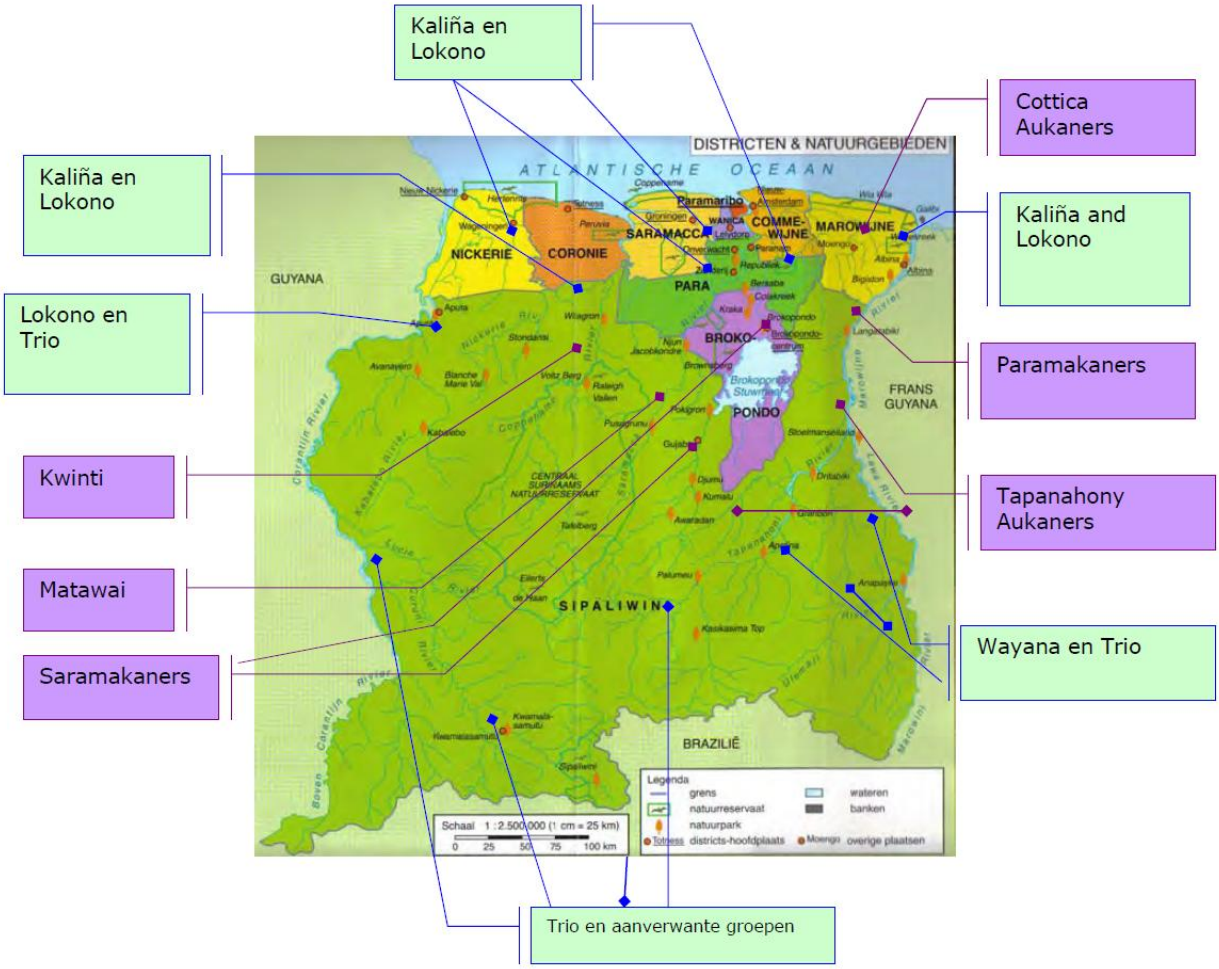


Figure 1.3: Indigenous and maroon areas in Suriname

Source: Kambel, 2009

For the consultations with the representatives of the Indigenous and tribal communities, a culturally appropriate way of information exchange is required, and RINA used the *krutu*. In Suriname, the culturally appropriate procedure called the *krutu* model, which is used by both the Indigenous and the Maroons communities. *Krutu* is the term for a traditional gathering of the Indigenous and tribal peoples in Suriname.

Elements of a *krutu need to be* incorporated in the consultation process. The exact process depends on the culture of the local community:

- The invitation almost always goes through the traditional authority;
- All community members can participate in the *krutu, as it is* usually accessible to everyone;
- The subjects are presented to the community by the traditional authority, or a person designated for that purpose;
- For decision making participants retire to confer and deliberate;
- The community representative presents the results of the deliberation;
- There can be additional discussions and feedback;

- A summary of the discussion is made;
- Decisions are formulated;
- Decisions are agreed;
- The *krutu* closes.

For the purpose of the SESA consultation, we first approached the traditional authorities of the communities we wanted to consult. They were allowed to indicate where, when and with whom the meeting could take place.

At the beginning of each meeting, the RINA team explained the purpose of the consultation. Subsequently, an explanation was given about the SESA. Then questions related to the SESA were presented to the participants.

Where necessary, the participants had the opportunity to deliberate. On various occasions, the participants asked for clarification about matters that were not clear to them. When all questions were answered and comments were addressed, RINA thanked the participants for their collaboration, and committed to keeping them informed on a continuous basis for the duration of the SESA study.

Consultation was conducted in selected communities where mining directly affected the communities or where members of the community are actively involved in mining activities.

For the maroon communities directly involved in mining, RINA visited the districts of Marowijne, Brokopondo and Sipaliwini. In Marowijne we met with Ndjuka Maroons of Adjumakondre (bauxite). In Brokopondo we met with Ndjuka Maroons of New Koffiekamp and Compagnie Kreek, and Saramaka Maroons of Balingsoela. In Sipaliwini we met with Paramaka Maroons of Langatabiki (Resort Paramaka – twelve villages)[5].

To understand the impacts and receive the opinions of IP communities, we met with representatives of the Organization Kaliña and Lokono of Lower-Marowijne (KLIM) in Erowarte. The KLIM represents the eight Indigenous communities of Lower-Marowijne. We also met with Wayana people represented by the Mulokot Foundation. The Wayana people are not directly involved in mining themselves but are affected by mining because part of their land is used for mining.

Several consultations occurred between October 2022 and March 2023. The purpose of the March communication was to update the stakeholders on the development of the SESA, and to send stakeholders the link provided by the MNR for them to access the Scoping report made available on the MNR website. Moreover, the Regulatory framework and Institutional Assessment report was sent to the stakeholders for Review and Comments. Table 1.2 shows the Indigenous (in yellow rows) and Tribal stakeholders (in light blue rows) that were contacted and visited during the SESA process, the means of consultation, the estimated number of persons that attended the meetings, the population of each population, and the source of information.

[5] Nikos (2016), Pamaka Ontwikkelingsplan 2016-2020.

Table 1.2 Public consultations with IP and tribal stakeholders

IP and tribal Stakeholder	Means of consultation	Population	Source of population data
Wayana Indigenous peoples' authorities and representatives of the community	Visit to the representative office Mulokot Foundation Direct conversation with a total attendance of 4 authorities and community representatives during both visits	Mulokot Foundation represents six Wayana communities with 1.484 peoples.	https://vids.sr/about/dorpsbesturen/
Njuka (Aucaners/Aukanisi) Maroon tribe authorities and representatives of the community	Visit to New Koffiekamp community Direct conversation with a total attendance of 8 authorities and community representatives during both visits	The village of Nieuw Koffiekamp has approximately 300 registered inhabitants.	Rosebel Gold Mines, Community Relations Department Report. October 2012 Social Baseline Data Collection Tailing Storage Facility Expansion Project.
Paramaka Maroon tribe authorities and representatives of the community	Visit to Langatabbetje community Direct conversation with a total attendance of 20 authorities and community representatives during both visits	Langatabbetje is the seat of the Pamaka Chief (Granman) who represents twelve communities of about 4.500 peoples.	NIKOS, Pamaka Development Plan 2016-2020.
Njuka (Aucaners/Aukanisi) Maroon tribe authorities and representatives of the community	Visit to Adjoema Kondre community Direct conversation with a total attendance of 3 authorities and community representatives	Adjoemakondre has an estimated population of 200. Captain Theo Palata together with his bashas, assistants, represent the population.	Account of Captain Palata and his assistants during conversation. Meeting report Adjoemakondre.
Njuka (Aucaners/Aukanisi) Maroon tribe authorities and representatives of the community	Meeting with Kawina community authorities and community members from Jaffa, Peninica, and Gododrai in Paramaribo. Direct conversation with a total attendance of 11 authorities and community representatives during both visits	The Kawina participants at the discussion represents six communities of about 3.900 peoples.	Oral explanation of Mr. Michel Noordzee (participant at the meeting)
Kaliña and Lokono Indigenous peoples' authorities and representatives of the community	Visit to Kaliña & Lokono Inheemsen beneden Marowijne (KLIM), in Erowarte community Direct conversation with a total attendance of 4 KLIM	KLIM represents nine Kaliña and Lokono communities of 2.304 peoples.	https://vids.sr/about/dorpsbesturen/

IP and tribal Stakeholder	Means of consultation	Population	Source of population data
	authorities and community representatives during both visits		
Matawai Maroon tribe authorities and representatives of the community	Visit to New Jacobkondre community Direct conversation with a total attendance of 21 authorities and community representatives during both visits.	The population of Nieuw Jacob kondre is approximately 87-100 peoples.	Environmental Research Management (ERM), Saramacca Satellite Mine Project: Environmental Social Impact Assessment. December 2018.
Saamaka Maroon tribe authorities and representatives of the community	Visit to Balingsoela community Direct conversation with a total attendance of 2 authorities and community representatives	Balingsoela has an estimated population of about 1.000 peoples.	Oral explanation of village leaders during conversation.
Aukanisi Maroon tribe authorities and representatives	Meeting with Aukanisi Maroon tribe, in Compagnie Kreek community Direct conversation with a total attendance of 11 authorities and community representatives during both visits	Compagnie Kreek has a population of approximately 600 peoples.	Oral explanation of village leaders during conversation.
Association of Saramacca Traditional Leaders (VSG)	WhatsApp Participation on Workshop and Direct conversation with a total attendance of 9 authorities and community representatives in Paramaribo.	VSG has a mandate of the Saamaka Paramount Chief (Granman) to represent the Saamaka People on the land rights issue. There are approximately about 25.000 Saamaka.	Tropenbos International Suriname (2017), Saamaka Lio as habitat and productive landscape: Lessons for inclusive and sustainable land use planning from the Upper Suriname river area.
Foundation for Sustainable Development of Pamaka (Pamaka Communities)	WhatsApp	The Foundation for Sustainable Development of Pamaka work for the twelve communities of about 4.500 peoples.	NIKOS, Pamaka Development Plan 2016-2020.

Source. RINA, 2023

As presented in table 1.2 above, eight IP representatives were directly engaged, and 3,788 persons were indirectly engaged with a potential of 20,344 total Indigenous population with the sharing of information through of VIDS and community leaders. The total Number of tribal (maroon) populations engaged directly was 85 persons and indirectly is estimated at 15,090 persons involved in mining in the visited communities, with a potential 25,000 persons with the sharing of information through VSG and community leaders that attended the meetings. Other vulnerable groups such as women are

underrepresented in the communities. Unlike other South American countries such as Bolivia, Peru and Ecuador, few women participate in the mining activities. Rather, women are indirectly participating through the selling of food and other supplies, and in some communities, through personal services such as cooking, cleaning and also prostitution. Further studies are needed to identify support systems for women and youths in conditions of violence, abuse and similar situations.

1.8.2 Mining potential and trend scenarios

The ToRs call for forecasting different case scenarios for mining sector development. Forecasting the behavior of the mining sector implies taking into consideration controllable and uncontrollable issues. Based on this precept, the forecasting of possible mining scenarios has taken into consideration three main factors:

1. The first is the external, or global, environment faced by Suriname, its mining sector, and the different minerals in the world context. These external factors are largely outside of the influence of Suriname, and include commodity prices, substitution, climate change, and technological developments.
2. The second is the internal, or Suriname, environment and how it pertains to the mining industry and, ultimately, to a particular scenario. These internal factors should be within the ability of Suriname to change, or at least modify, given political will and/or a clear action plan as an outcome of the strategic options chosen out of the analysis of the potential scenarios. These include political, economic, social, technological, environmental, and legal factors.
3. The third strand is the integration and use of outcomes, conclusions and analysis from previous studies and reports put together over the past two decades on Suriname. These sources are an important resource that gives detail, depth, and source variety to the analysis from the point of view of geology, economics, policy, legal, environmental, social, and other contexts.

Figure 1.4 shows current locations of mining activities and mining titles.

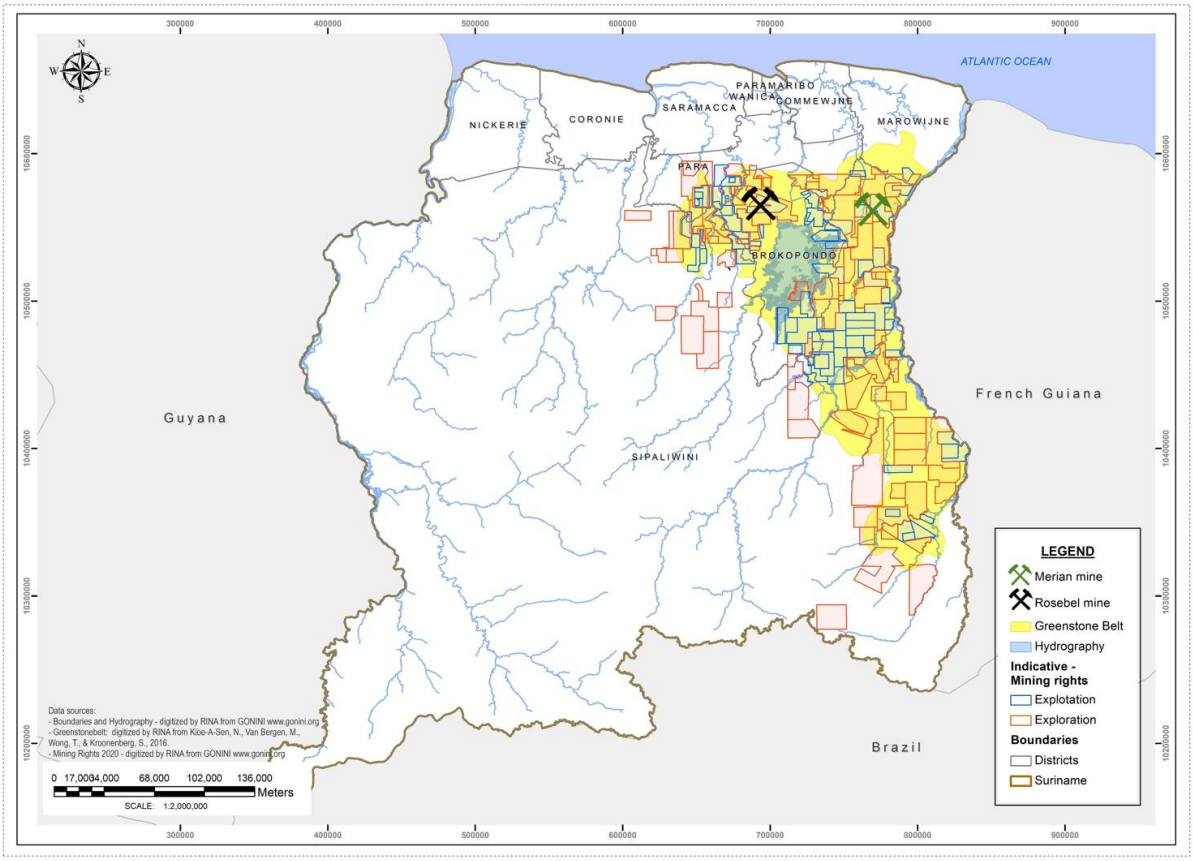


Figure 1.4: Greenstone belt, mining titles and current Industrial Mining sites

Source: (GOS, 2022b) and (ACT, 2015) adapted by RINA, 2022

1.8.2.1 Trend scenarios

An analysis of the mining sector's development used assumptions such as discoveries, resource studies, exploration results, Suriname's macroeconomic development, ease of doing business/export environment, transport infrastructure and services.

Two future mining development scenarios for Suriname in the coming years were identified. The scenarios are based on the data collected during the SESA process, and from information provided by the MNR. The two identified scenarios are:

1. The Base Case Scenario**,** a conservative scenario where timing is not considered to be a driving factor, potential outcomes can therefore be more fully considered and associated risks can be managed timely.

   This scenario has limited technical and commercial development in the short-term that will promote exploration and extraction operations planned for the next five years.

2. The Accelerated Case Scenario, an optimistic scenario where timing is a significant consideration and the integration of parts of the subsectors is not contingent on the alignment of all aspects before investment decisions are made. This scenario appears to be contingent on the early availability of cross funding from the Oil and Gas industry.

   This scenario implies a rapid growth of the mining sector with concrete results from the planned exploration and operations and offers opportunities for Suriname's Development within the next five

years, while opening new opportunities for future development on a medium and short-term basis especially for infrastructure and energy.

A preliminary analysis for each sector considering the two identified scenarios is presented in table 1.3 and table 1.4. Each table takes into consideration three targeted sectors that are, the Large-Scale Gold Mining Sector, Artisanal and Small-scale Gold Mining (ASGM), and the reactivation of the Large-Scale Bauxite and Alumina (mining, smelting/refining).

Table 1.3: Base Case Scenario: Conservative Mining Sector Development

Potential Mining Sector Development	Constraints/Challenges	Opportunities
Large Scale Gold Mining Sector	1. Infrastructure: • Minimal additional regional infrastructure requirements are necessary, however some improvement in transport services may be required. • Any infrastructure needed to support the mining development program will have environmental and social impacts. This infrastructure may be considered associated infrastructure which will require proper management of E&S risks.	• Adequate time available for exploration and discovery of new deposits in Greenstone belt geological environment – continuation of current situation. • Chance to implement cross over of lessons, skills and legislation to ASGM sector, including environmental issues such as decreasing the use of mercury, and better management of soil, sediment, water, deforestation and biodiversity impacts. • Associated Infrastructure improvement can be planned and designed to have less cumulative impacts, addressing the specific needs for basic services to local and tribal communities involved in mining and Indigenous communities providing assistance for infrastructure including access roads, health and educational facilities, basic services such as water, electricity and telecommunications, all of which will contribute to improving the quality of life of the local populations, These are to be decided within the community and agreed with the mining companies. • Benefit sharing (% of income or profit) that supports the construction of local infrastructure and community development.
	2. Land Rights • Litigation over land rights and land use issues with local inhabitants. 3. Capacity: Increased interest and participation in the sector would require assessment and possible changes to legal, fiscal and land ownership frameworks.	
	4. Investment Cost: Investment costs borne by mining companies might require legislation to internalize costs associated with mine closure and other potential environmental and social impacts. For the base case scenario, considering the short-term of project development financing will need to come mainly from the mining companies themselves to ensure the implementation of the required infrastructure for the mining activities.	
	5. Timing: Ongoing, no real time constraints.	
	6. Environmental liabilities • Mining waste disposal • Water management • GHG emissions	

Potential Mining Sector Development	Constraints/Challenges	Opportunities
	• Deforestation • Protected area encroachment • Biodiversity loss	• If land rights are recognized, communities will have the right to decide whether concessions are given and can receive compensation for the use of their land for mining activities. • Reduction of GHG • Water management and supply • Biodiversity offset • Compensation measures in protected areas • Employment opportunities • Better quality of life with benefit sharing through local access to health services, schools, clean water, electrical energy, communication systems, roads, etc.
Artisanal and Small-scale Gold Mining (ASGM)	1. Infrastructure: • Infrastructure required in the areas where mining is taking place, including provision of basic services such as sanitation, power, health services and other development requirements. • Transport infrastructure improvements (rivers, airfields, roads) required as well as potential improvements in transport services (rural airstrip services) and river vessel services/stellings. • Infrastructure needed to support the mining and regional development will have environmental and social impacts. This infrastructure may be considered associated infrastructure which will require proper management of E&S risks. 2. Capacity: • Enabling legislation around land reform. • Local capacity building • Attention to environmental issues – phasing-out and eliminating the use of mercury, better management of soil,	• Promote Suriname's development goals. • Chance to implement cross over of lessons, skills and legislation to ASGM sector, including environmental issues such as decreasing the use of mercury, and better management of soil, sediment, water, deforestation and biodiversity impacts. • Chance to properly include IP and tribal communities in the sector development through legislation. • Associated Infrastructure improvement can be planned and designed to have less cumulative impacts through awareness and capacity y building programs on clean technology and best practices. • Employment opportunities

Potential Mining Sector Development	Constraints/Challenges	Opportunities
	sediment, water, deforestation and biodiversity impacts.	
	3. Investment Cost: Investment costs can be seen as economic and social development costs, potentially constrained by budget and policy.	
	4. Timing: Timing associated with development goals, enabling legislation and budgetary availability.	
Large Scale Bauxite and Alumina (mining, smelting/refining)	1. Infrastructure: Several constraints need to be considered, including access to surface land for development of new infrastructure (mine areas, road and rail infrastructure, port facilities, power plant, processing facilities), access to energy and or course financing. Infrastructure needed to support the mining development program will have environmental and social impacts. This infrastructure may be considered associated infrastructure which will require proper management of E&S risks. 2. Land Rights Litigation over land rights and land use issues with local inhabitants.	• Development of Oil and Gas sector goes hand in hand with development of bauxite sector: Cheap electricity, cross funding from fiscal returns. • The national Oil and Gas company Staatsolie Maatschappij Suriname N.V. is involved in from exploration to extraction, production and refining. It is constantly increasing its production, which in 2022 shows a growth of over 50% compared to 2021 • Suriname has a stated intention to restart the bauxite industry that could generate employment and other income generating opportunities. • Potential to have a positive impact on other development goals in Suriname. • Suriname has significant bauxite reserves. • Over 100 years of experience in bauxite mining with the potential to restart without major aluminum mining companies. • Deep coastal waters (offshore) are favorable for bulk shipping. • New contracts could be negotiated with mining companies and financial risks shared with other players. • Chance to restore and repurpose degraded land
	3. **Capacity**: Development of related legal and fiscal frameworks, including environmental legal framework, closure legislation, and legislation on land ownership and rights.	
	4. Investment Cost: Costs of restarting the bauxite subsector would be high (> USD 3 billion).	
	5. Timing: Time required to restart the subsector would be in the order of 10 years.	

Potential Mining Sector Development	Constraints/Challenges	Opportunities
		associated with historic bauxite exploitation. • Better quality of life with benefit sharing through local access to health services, schools, clean water, electrical energy, communication systems, roads, etc.

Source: RINA, 2022

Table 1.4: Accelerated Case Scenario: An Optimistic Mining Sector Development

Sector	Constraints	Opportunities
Large Scale Gold Mining Sector	1. Infrastructure: • Minimal additional regional infrastructure requirements are necessary, however some improvement in transport services may be required. • Infrastructure needed to support the mining development program will have environmental and social impacts. This infrastructure may be considered associated infrastructure which will require proper management of E&S risks. 2. Land Rights: • Litigation and conflict over land rights and land use issues with local inhabitants associated with the development of mining infrastructure, adds to country risk and could negatively influence mining company investment decisions and entry of new players.	• Opportunity to accelerate implementation of crossover of lessons, skills, and legislation to ASGM sector, including environmental issues such as decreasing the use of mercury, and better management of soil, sediment, water, deforestation and biodiversity impacts. This would likely require enabling legislation. • Potential to focus attention on the key issue of land rights in Suriname and obtain a long-term solution with societal and fiscal benefits that would accrue • Accelerate the development and implementation of a more appropriate mining law • Promote and implement the grievance mechanism applicable to the mining sector. • Set-up an implementation and monitoring plan for the applicable laws related to environmental impacts of mining activities.
	3. Capacity: Increased interest and participation in the sector would require assessment and possible changes to legal, fiscal and land ownership frameworks in the short-term. Strong government will and resources are required.	
	4. Investment Cost: Investment costs borne by mining companies require legislation to ensure that costs associated with mine closure and other potential environmental and social impacts are internalized. Financing will need to be available to allow for the development of the required infrastructure	

Sector	Constraints	Opportunities
	implementation of the applicable laws and regulations.	
	5. Timing: Timing constraints are associated with the time needed to enable environmental, mine closure and land reform legislation and regulatory changes in the law and tax regime.	
	7. Environmental liabilities The accelerated scenario will require a more stringent application of the related regulations to control environmental impacts such as: • Mining waste disposal • Water management • GHG emissions • Deforestation • Protection area encroachment • Biodiversity loss	
Artisanal and Small-scale Gold Mining (ASGM)	1. Infrastructure: • Infrastructure required in the areas where mining is taking place, including provision of basic services such as sanitation, power, health services and other development requirements would require access to budget. • Transport infrastructure improvements (rivers, airfields, roads) required improvements in transport services (rural airstrip services) and river vessel services/stellings. • Infrastructure needed to support mining and regional development will have environmental and social impacts. This infrastructure may be considered associated infrastructure which will require proper management of E&S risks.	• Cross funding in the short-term could be available from potential revenues from the Oil and Gas sector. • Ability to positively affect some of Suriname's development goals in short-term through better infrastructure. • Chance to accelerate the implementation of the crossover of lessons, skills and legislation to ASGM sector, including environmental issues such as decreasing the use of mercury, and better management of soil, sediment, water, deforestation and biodiversity impacts. • Chance to address needed basic services to tribal communities involved in mining and Indigenous communities with income and assistance for infrastructure including access roads, health and educational facilities, basic services such as water, electricity and
	2. Capacity: • Enabling legislation around land reform would have to be accelerated. • Local capacity building. • Attention to environmental issues – eliminating the use of mercury, better management of soil, sediment, mineral resources, water, deforestation, and biodiversity impacts.	

Sector	Constraints	Opportunities
	3. Investment Cost: Costs would require early access to the necessary budget, which might not be available if potential Oil and Gas revenues are not realized in the short-term. 4. Timing: Timing would be constrained by enabling legislation and access to budget.	telecommunications, all of which will contribute to improving the quality of life of the local populations, These are to be addressed within the community and agreed with the mining companies.
Large Scale Bauxite and Alumina (mining, smelting/refining)	1. Infrastructure: • Infrastructure dedicated to the bauxite industry through 2015 will have to be re-evaluated and recommissioned, on accelerated schedule (railways, Paranam plant). • Port infrastructure will need to be evaluated, designed and built, on an accelerated schedule. Possible impact to fisherfolk and biodiversity if not managed properly. • Energy supply for alumina and possibly aluminum production will have to be evaluated, designed and commissioned. • Infrastructure needed to support the mining development program will have environmental and social impacts. This infrastructure may be considered associated infrastructure which will require proper management of E&S risks. 2. Land Rights: • Litigation and conflict over land rights and land use issues with local inhabitants. 3. Capacity: Accelerated development of related legal and fiscal frameworks, including environmental legal framework, closure legislation, and legislation on land ownership and rights would be required. 4. Investment Cost: • New contracts would not necessarily be negotiated with mining companies while financial risks would not be shared with other players but taken on by the Suriname government. Nevertheless, the GOS does not have the financial capacity to undertake such projects on its own. Therefore, a feasible option is that the	• Oil and Gas sector is set to take off rapidly with the discovery in neighboring Guyana of significant offshore gas reserves. Development of Oil and Gas sector takes place hand in hand with development of bauxite sector with accelerated cross funding from O&G fiscal returns. • Cheap electricity generation from gas-fired power stations. • Suriname has a stated intention to restart the bauxite industry. • Potential to impact other development goals in Suriname in the medium-term. • Potential to focus attention on the key issue of land rights in Suriname and obtain a long-term solution with societal and fiscal benefits that would accrue. • Suriname has significant bauxite reserves. • Over 100 years of experience in bauxite mining with the potential to restart without major aluminum mining companies. • Deep coastal waters (offshore) that are favorable for bulk shipping.

Sector	Constraints	Opportunities
	GOS work in a joint venture with multinationals for new bauxite exploration and exploitation contracts to restart the bauxite industry. • Costs of restarting the bauxite subsector would be high (>USD 3 billion) and would be disbursed over a relatively short time frame.	
	5. Timing: • Exploration would have to be restarted and reserves would have to be defined and restated (> 2 years). Lower standards of reserve definition might be required, to reduce associated risks. • Engineering feasibility studies for new mines and environmental permitting would take a considerable time to be completed (> 5 years). Permitting would have to be streamlined without affecting environmental and social protections.	

Source: RINA, 2022

A wide range of intermediate scenarios may also be developed and are likely to occur in Suriname. The intent of the above two trend scenarios is to identify the main environmental and social constraints associated with the two suggested mining development scenarios. To do this, it is necessary to identify the factors that need to be considered in the selection of a scenario. Amongst the factors to be considered in defining future mining development scenarios are the demand for gold and bauxite at local and international levels, the prices of the minerals, and access to mining sites. Other factors include mineral global markets, political stability and the effectiveness of the mining regulatory framework. Environmental and social impacts need to be taken into consideration, and the negative effects be mitigated with specific actions supported by appropriate laws and regulations. The promotion and implementation of the new grievance mechanism applicable to the mining sector will provide a tool that can help mitigation environmental and social impacts for all scales and types of mining activities.

2 CRITICAL ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

The identification of critical environmental and social challenges facing the development of the mining sector in Suriname is necessary to ensure that proper management actions be taken. It was therefore necessary to understand the general strategic E&S consequences and the environmental and social impacts of mining. Moreover, some challenges can significantly impact the mining sector and may lead to critical issues, concerns and potential impacts if no actions are taken.

To meet these challenges, Section "Mitigations and monitoring measures" includes measures and recommendations to minimize environmental and social risks and impacts using existing international best practices, guidelines for the mining sector, operational standards and monitoring measures.

It is likely that the actual trend of the mining development in Suriname will be an intermediate case between the two proposed scenarios. Nevertheless, these development scenarios may be purely speculative due to the following reasons:

- ✓ Lack of a clear understanding of actual and proposed mining company programs;
- ✓ Unavailability of information regarding the bauxite mining requirements for restarting its operations in Suriname;
- ✓ Licensing for mining rights should be homogenized for all mining companies and should take into consideration land that is located in Indigenous and tribal territories as part of the revised regulatory framework of the GOS.

Notwithstanding the above-mentioned factors, it is important to note that the risks as well as the mitigation measures are consistent across the three mining sectors, with the most common issues those listed in table 2.1 below, which presents preliminary review of these issues, their associated risks and impacts along with the identified strategic objectives related to each issue.

Table 2.1 Strategic objectives for main risks and impacts from mining

Issues	Risks & Impacts from Mining (informal and formal)	Strategic Objectives
Water	• Water contamination by mercury and sediments in river ecosystems • Potable water shortages • Surface run-off • Reduced Water quality • Reduced Water supply	• Ensure water provision for usage and drinking • Protect quality of surface water and aquifer resources • Ensure sustainable water resources management • Protect and preserve marine water quality • Prevent conflicts (including transboundary) over water use, quality and quantity • Promote clean technologies for mining
Air	• Air quality pollution • GHG emissions	• Enhance and/or maintain air quality • Control GHG and pollutant emissions to acceptable standards
Geology and soils	• Soil and subsoil contamination	• Protect quality of seabed and sediments • Preserve the hydrogeological environment • Maintain / recover / improve soil quality
Flora and fauna	• Loss of biodiversity • Physical damage to biotopes • Fragmentation of habitats • Removal of wildlife and forest	• Preserve terrestrial and river ecosystems and their biodiversity • Preserve critical habitats and protected or endangered species

Issues	Risks & Impacts from Mining (informal and formal)	Strategic Objectives
	cover	• Ensure that protected areas (e.g., parks) are not affected by mining development • Contribute to conservation of wildlife and wildlife habitats • Implement an effective monitoring program • Include the IP and maroon societies in preservation activities of flora and fauna
Socio- economic	• Water conflicts • Disturbance to family networks, community structures and cultural and ethnic identities • Increase in drug trade and prostitution • Intrafamily and community GBV, SEA and SH) • Human rights violations (incl. child labor, trafficking, discrimination…) • Malaria and HIV • Communicable diseases • Community engagement in mining activities • Labor influx (especially *garimperos* from Brazil) • Dependence on mining activities	• Preserve social structure integrity • Sustain and enhance agricultural and cattle economic activities • Ensure mining companies prioritize local hiring and purchasing from local suppliers • Enhance community development • Ensure benefits from mining development • Avoid resource conflicts • Manage expectations over social, economic or other benefits associated with the development of mining. • Promote safety and security • Foster gender equality • Generate employment opportunities for local population • Share revenues • Post-closure rehabilitation • Broaden economic opportunities with directly and indirectly related mining activities
Land use and land tenure	• Allocation of land for mining activities • Economic and physical displacement	• Avoid, mitigate and/or compensate land acquisition in accordance with best practices
Indigenous Peoples (IP) tribal communities	• Involuntary resettlement of IP • Livelihood impacts of IP • Displaced hunting and fishing grounds • Intrusion of outsiders	• Protect Indigenous People and Tribal People and other vulnerable groups • Recognize cultural diversity and tradition • Ensure FPIC according to local traditional Krutu in the communities
Health and safety	• Potential for significant effects on human health • Malaria and other diseases spread (including sexually transmitted diseases) • Exposure to mercury during processing and its presence in food and water	• Prevent disruption, disturbance and nuisance to communities • Ensure public and community safety in areas of mining operations • Ensure a safe work environment for mining operators and employees and ASM workers • Promote stronger oversight and monitoring from relevant government authority.
Institutional, legal, and regulatory	• Conflicting roles and responsibilities for environmental protection and management • Poor inter-institutional coordination	• Implement effective, transparent inter-institutional coordination • Reduce and remove institutional barriers and duplication of effort

Issues	Risks & Impacts from Mining (informal and formal)	Strategic Objectives
	• Unknown training requirements and capabilities • Capacity for SESA implementation	• Improve institutional capacity and training • Establish clear, practical regulatory standards • Implement an efficient environmental assessment process • Implement monitoring, follow-up and compliance initiatives • Ensure that progressive rehabilitation and mine closure planning are part of Life-of-Mine Planning
Risk management	• Cumulative effects • Potential pollution of remote uncontaminated areas	• Ensure that risks associated with mining development are identified and managed. • Implement major hazards / Environmental risk management
Cultural resources	• Loss or alteration of cultural, archaeological and historical sites	• Preserve and valorize cultural heritage
Regional	• Trans-boundary pollution	• Manage trans-boundary effects • Manage cumulative effects

Source: RINA, 2022

2.1 IDENTIFICATION OF GENERAL STRATEGIC E&S CONSEQUENCES

The current regulatory framework fails to adequately address the environmental and social impacts of economic activities and potential land acquisition and resettlement requirement, creating gaps in the regulatory framework to manage environmental and social impacts which in turn generate negative impacts and creating risks that can jeopardize the sustainability of the activities and deter interest for new private investors. As the required subsidiary regulations of the Environmental Framework Act are still pending, the legal recognition of the collective rights of tribal communities is still lacking as well as the lack of proper regulation on monitoring and organizing the small-scale mining activities. With regard to the mining technical regulations, large-scale mining companies mainly use international standards in the absence of national standards or in the case of less stringent standards. Within mining, this creates risks for deforestation of the country's vast forest coverage (more than 90 percent of national territory) due to illegal gold mining, as well as widespread contaminative usage of mercury for gold extraction by artisanal and small-scale miners.

From 2001 to 2022, Suriname lost 226,000 ha of tree cover[6] while it is estimated that 73% of deforestation results from mining activities, particularly gold mining (REDD+, 2019). Figure 2.1 shows the extent of deforestation between the years 2000 and 2019, which occurs not only during exploitation but also during the exploration phase.

[6] https://www.globalforestwatch.org/dashboards/country/SUR/?category=forest-change&location=WyJjb3VudHJ5liwiU1VSIl0%3D&map=eyJjYW5Cb3VuZCI6dHJ1ZX0%3D

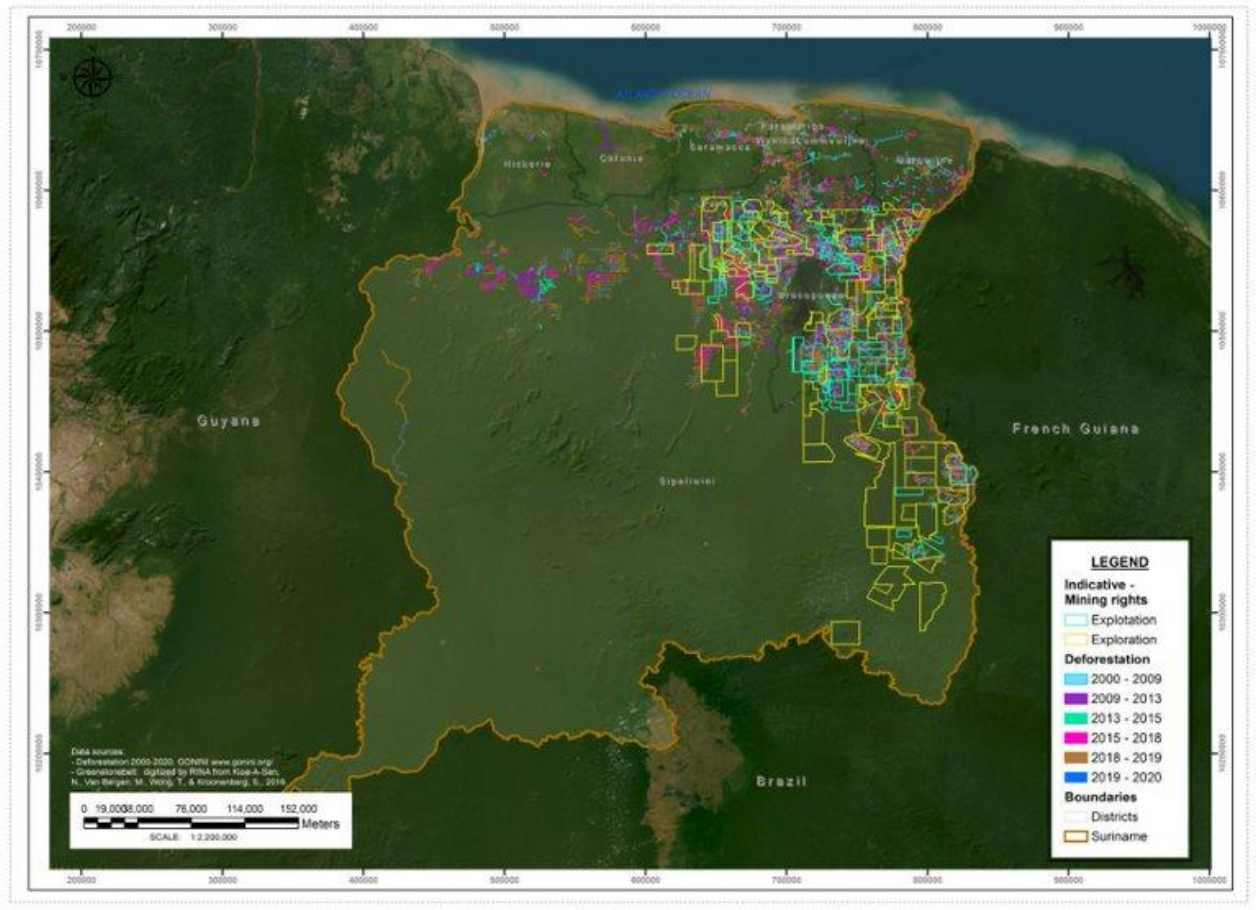


Figure 2.1: Extent of Deforestation (2000-2020)

Source: GOS, 2020b adapted by RINA, 2022

There are Indigenous and tribal populations living in areas with mineral potential, which often have land rights conflicts with informal (and formal) mining operations. The lack of transparency and capacity to monitor and enforce environmental and social regulations can encourage a race to the bottom across sectors, to the detriment of formally established firms seeking to comply with global standards such as Responsible Agricultural Investment, Global Sustainable Tourism Criteria, and IFC Performance Standards on Social & Environmental Sustainability.

The GOS is currently reviewing the regulatory framework for the mining sector, drafting a new mining act. Although a number of laws and regulations can be associated with the mining sector, their implementation and/or reinforcement remain a challenge. Consequently, the SESA focused on a review of the current mining development in Suriname considering the existing legal, institutional and regulatory framework, and the environmental and social baseline conditions for the mining development scenarios proposed.

Mining in Suriname is mainly focusing on Bauxite and Gold including formal and non-formal mining activities. These can be organized according to the different phases of the activities:

- ✓ Exploration phase
- ✓ Construction phase
- ✓ Operation phase
- ✓ Decommissioning and Abandonment phase (to be based on detailed closure plans)

- ✓ Post-closure
- ✓ Historical mining areas can be reviewed (especially applicable for a review of the closure obligations and closure residual impacts of the bauxite mining sites).

According to the existing mining Act, there is no definition for LSM or Bauxite mining. However, ASM is referred to as small mining and defined as: Exploring, exploring for and exploiting mineral deposits, of which the nature, occurrence and size makes extraction economically possible using simple means and technology. In order to understand the relationships, linkages and consequences of Large-Scale Mining (LSM), Artisanal and small-scale mining (ASM) and of the bauxite mining, a Mind Mapping exercise was undertaken to identify the mining operational issues likely to have detrimental effects or negative consequences on certain environmental and social aspects, at each level of operation.

Figure 2.2 shows an overview of the Impacts and their management for Bauxite mining, LSGM and ASGM during the various phases of the mining activities, starting from exploration, construction, operation, decommissioning, abandonment and closure, and post-closure.

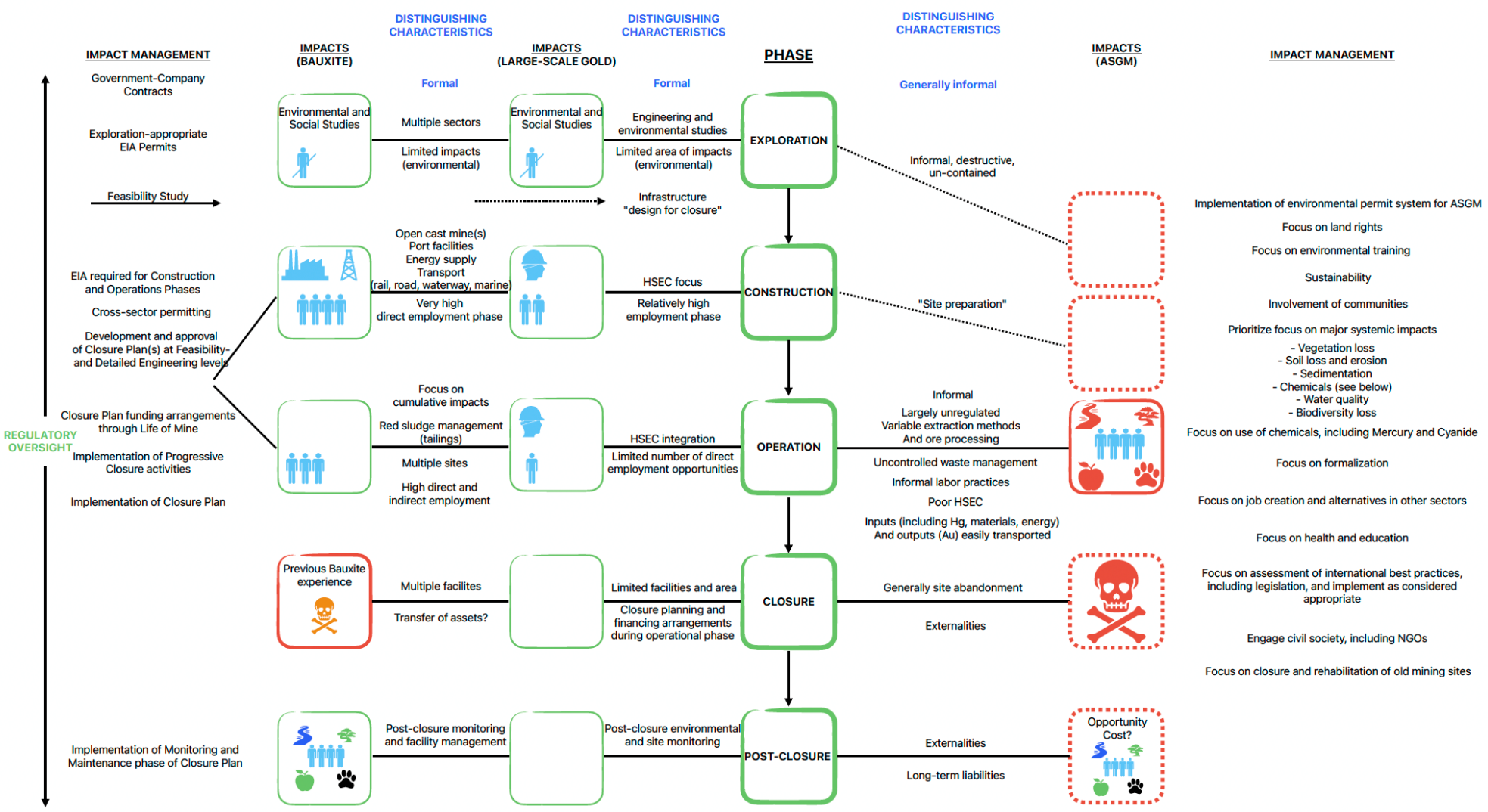
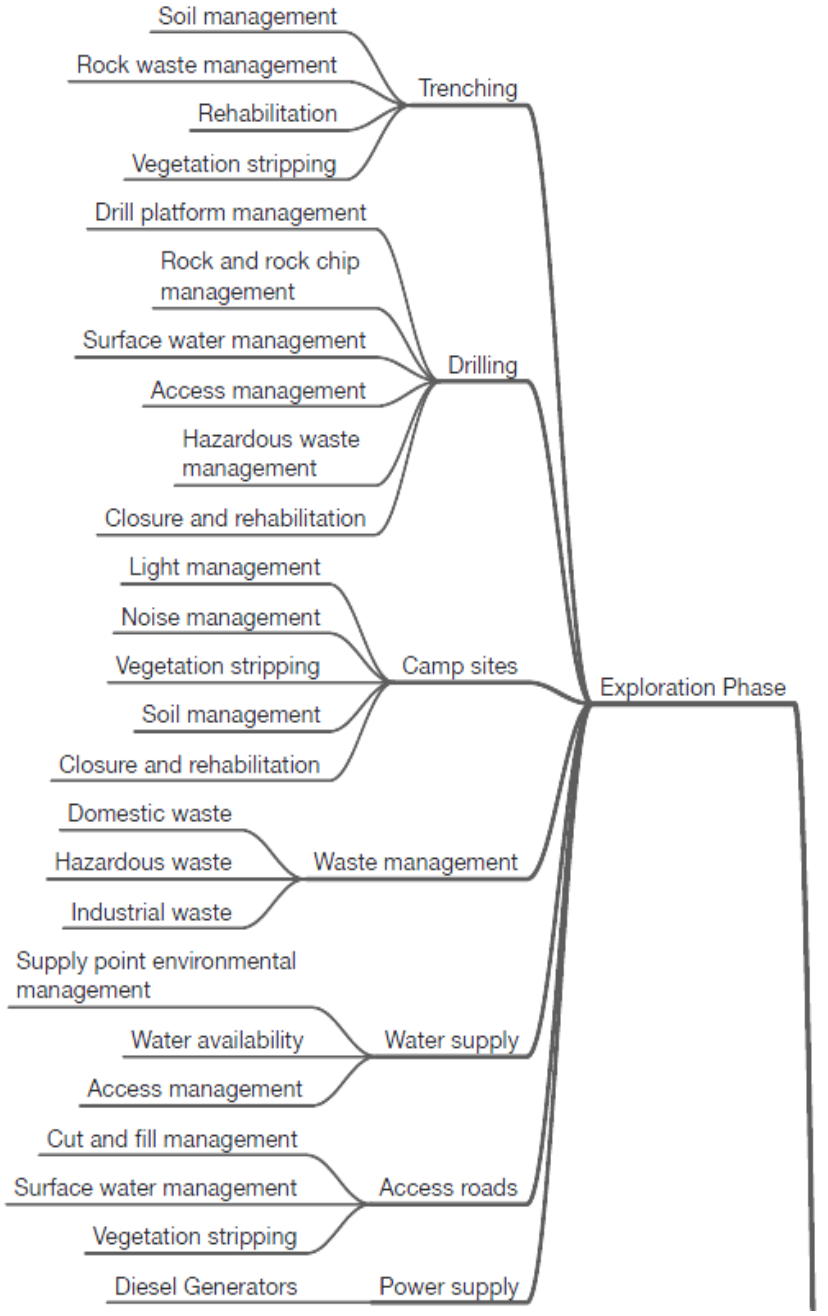


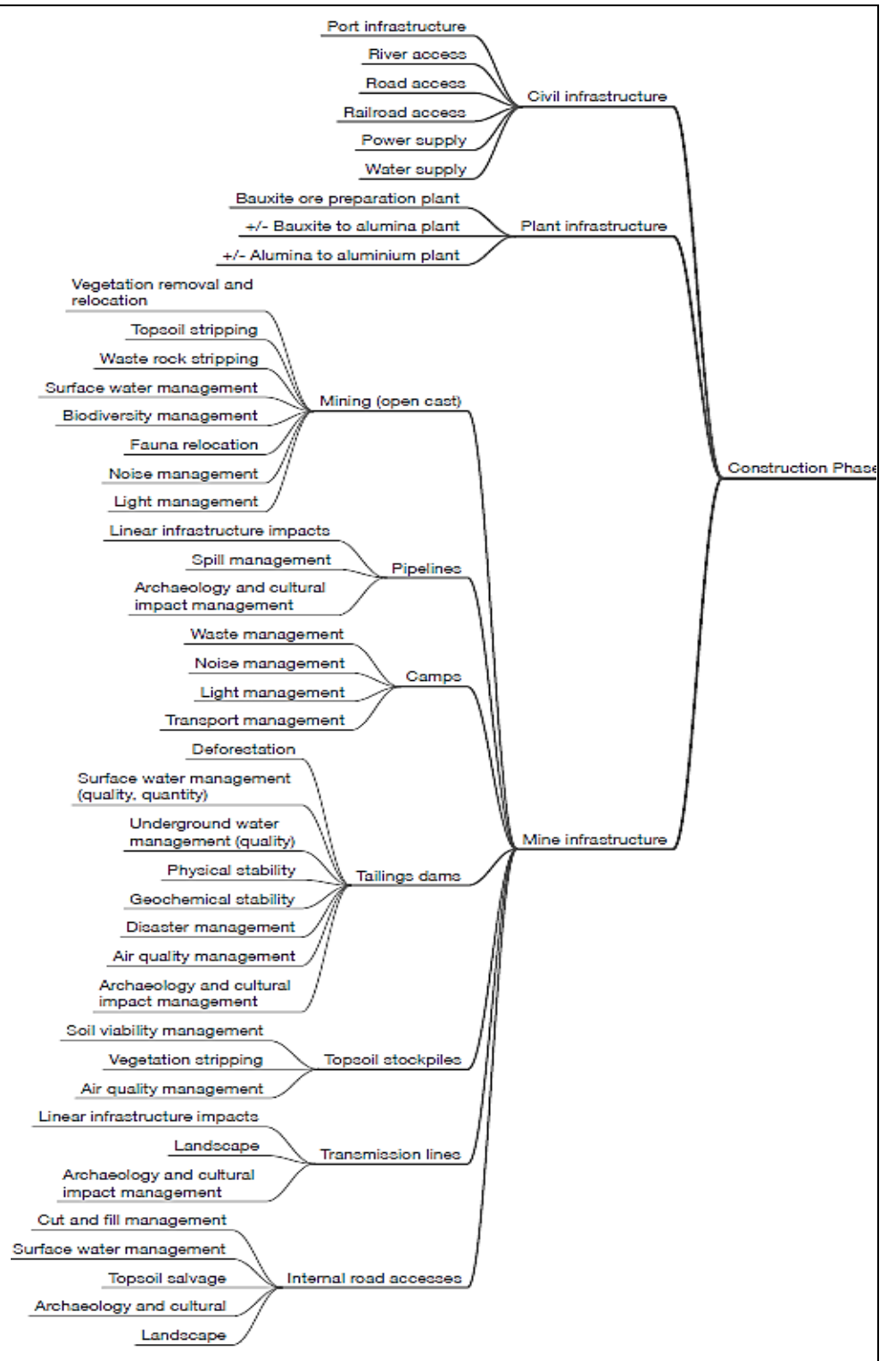
Figure 2.2: Overview of the impacts and their management for Bauxite mining, LSGM and ASGM during the various phases of the mining activities

Source. RINA, 2023

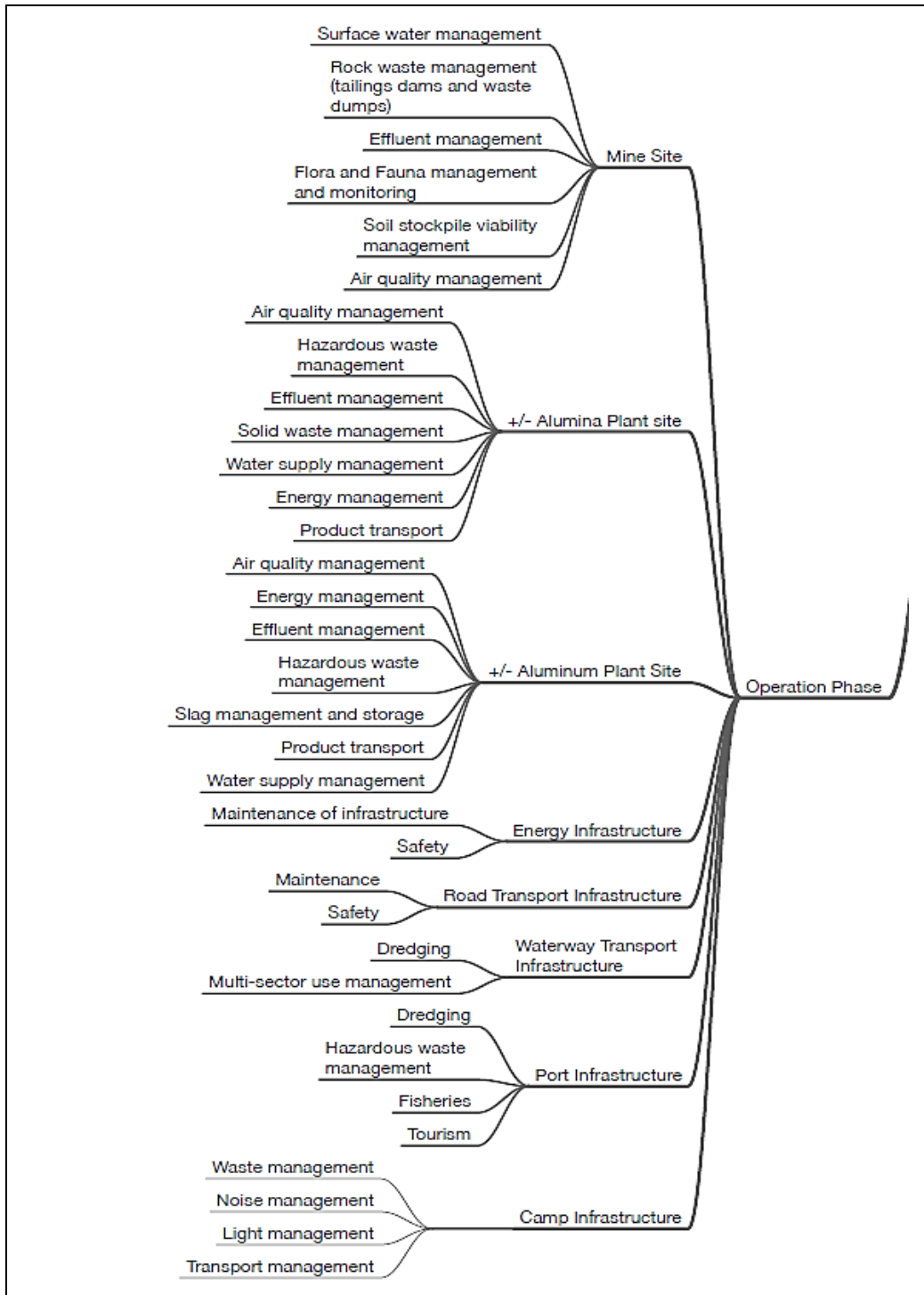
Figure 2.3 shows the differentiated impacts of Bauxite mining during each phase of the mining process and activities, starting from exploration, construction, operation, decommissioning, abandonment and closure, and post-closure.



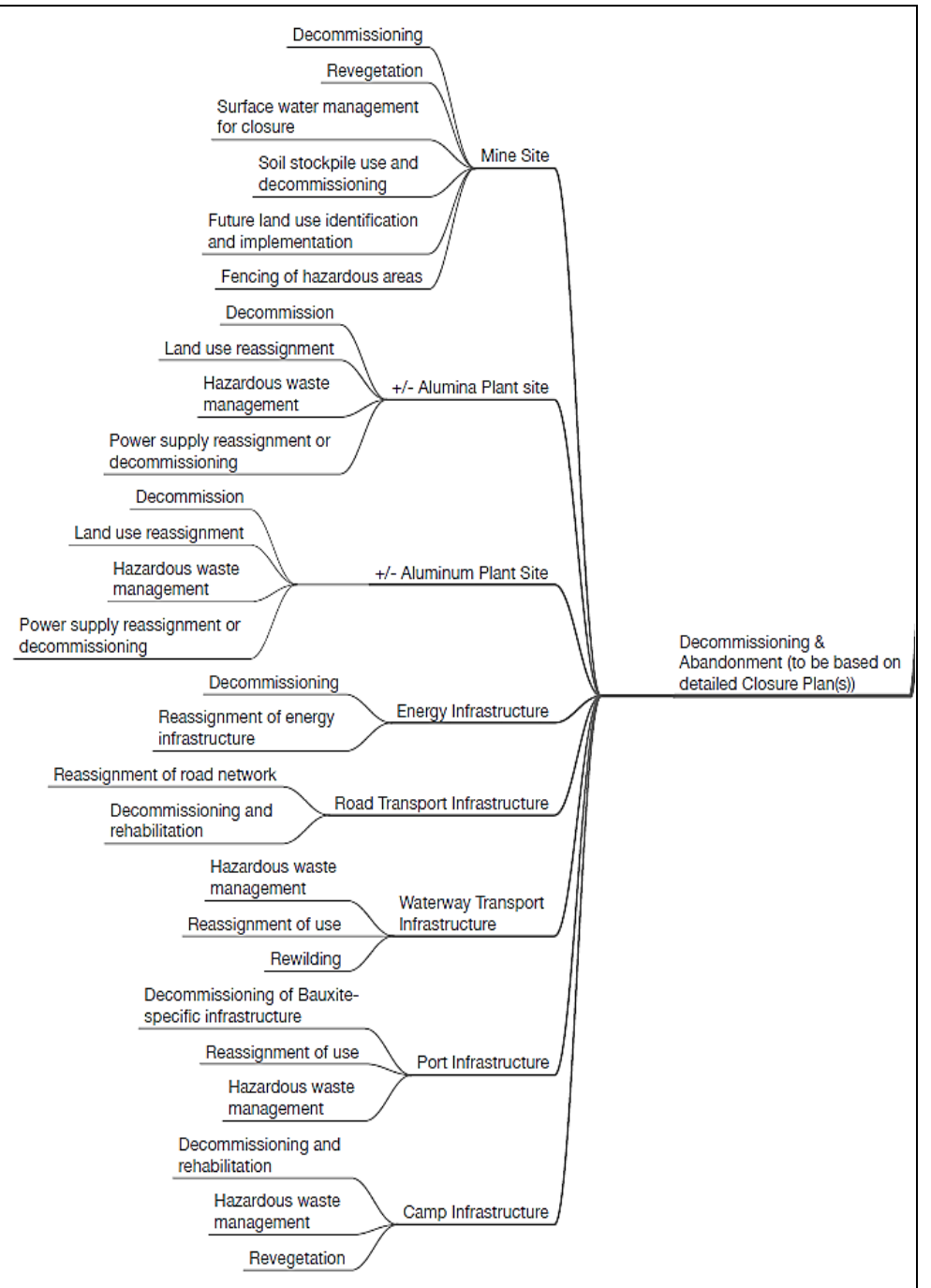
Impacts during exploration phase



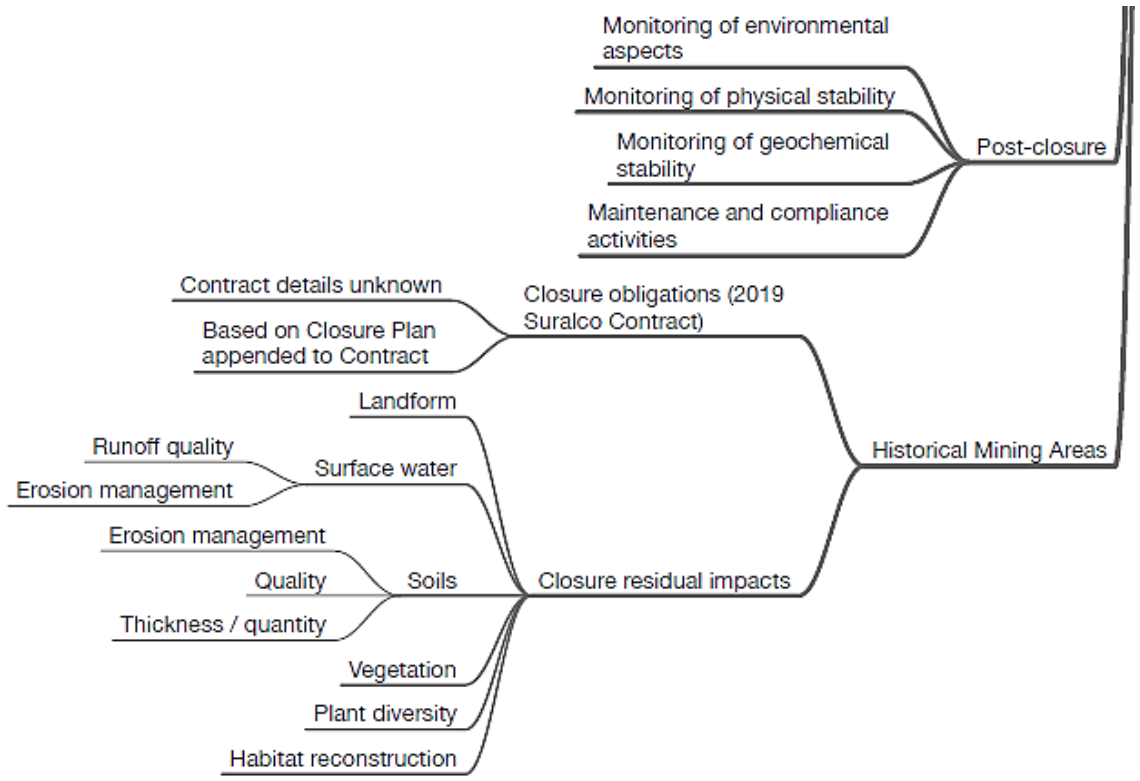
Impacts during Construction phase



Impacts during Operation phase



Impacts during Decommissioning and abandonment phase

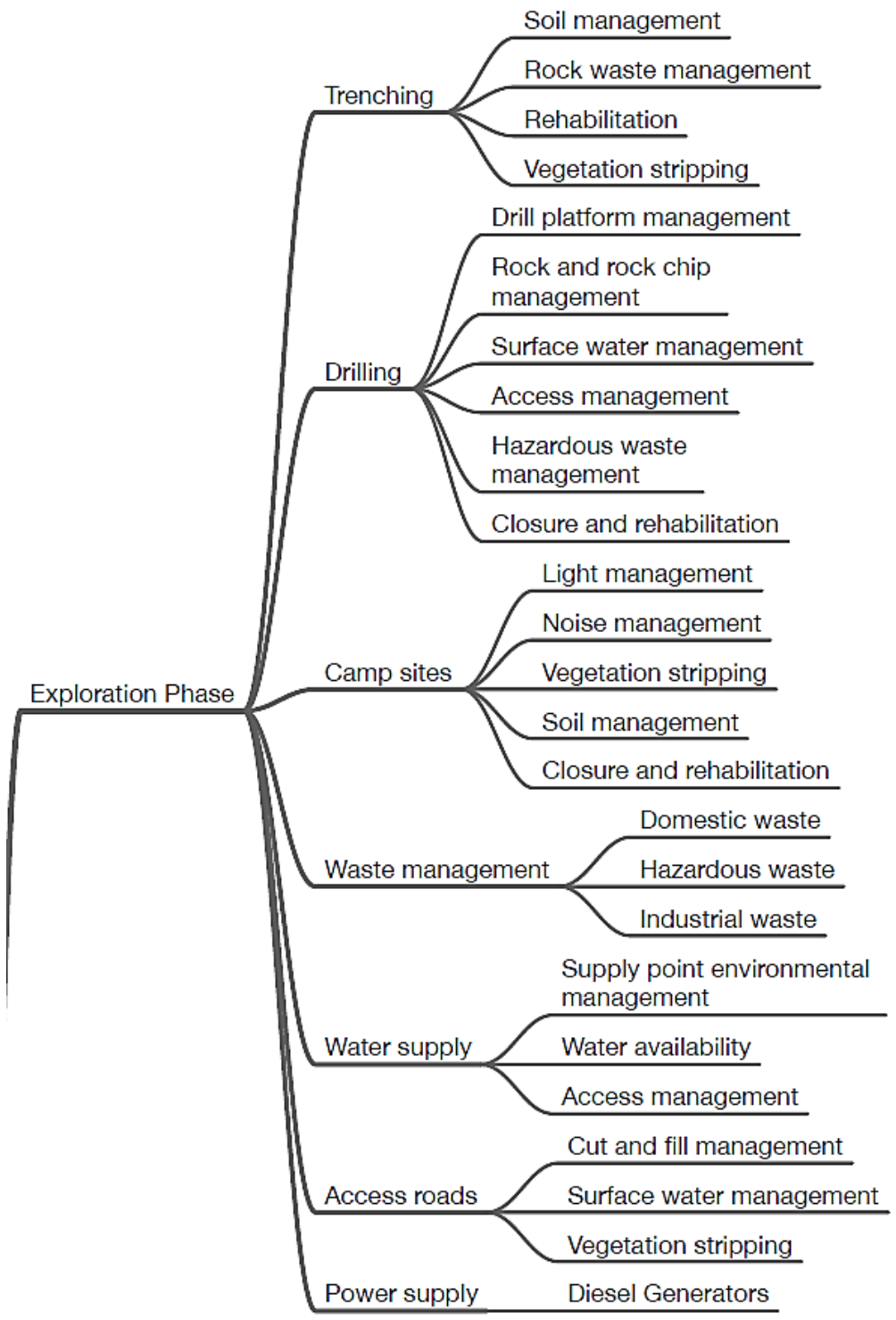


Impacts during post-closure and historical mining areas

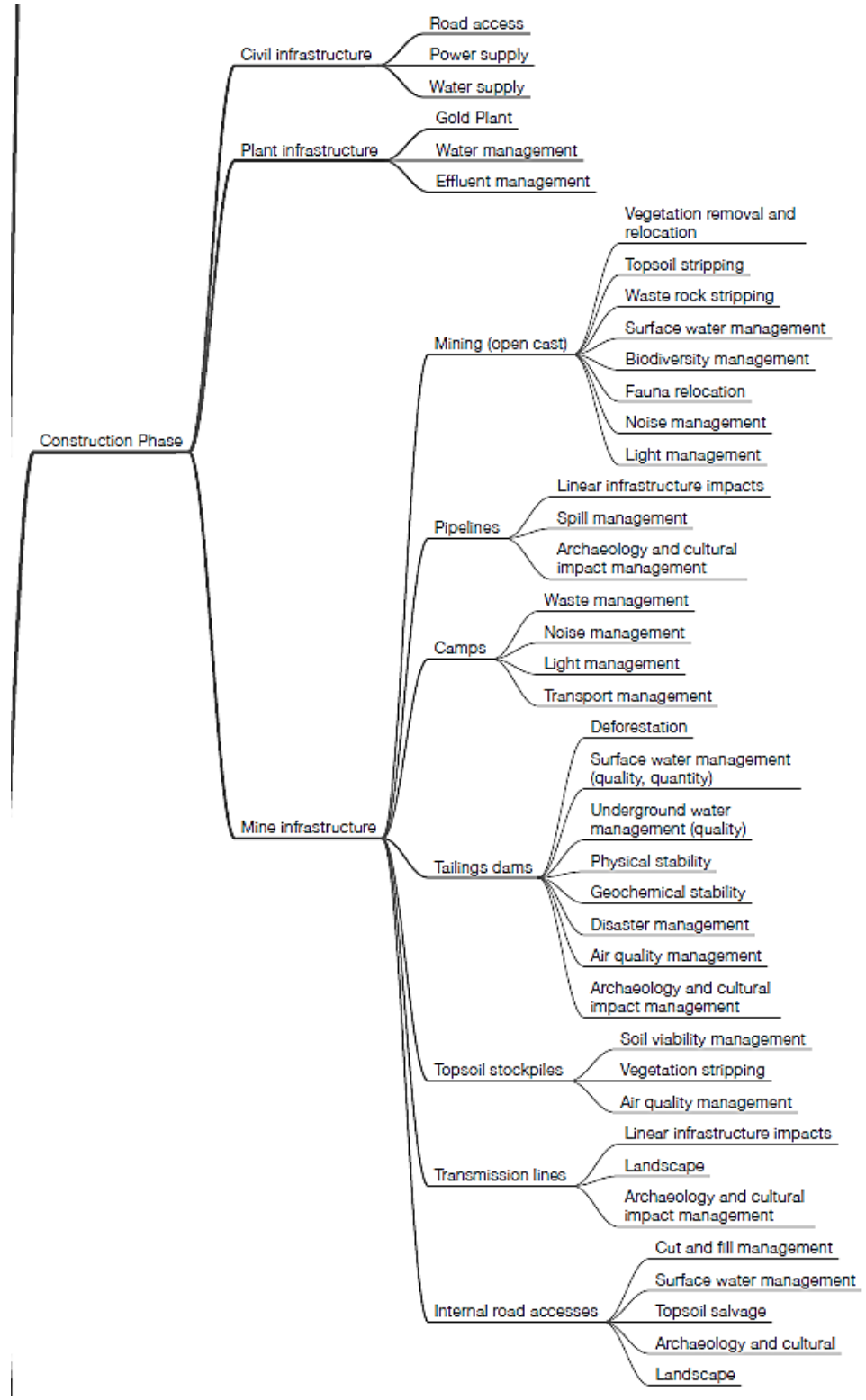
Figure 2.3 Impacts of Bauxite mining during the various phases of the mining activities

Source. RINA, 2023

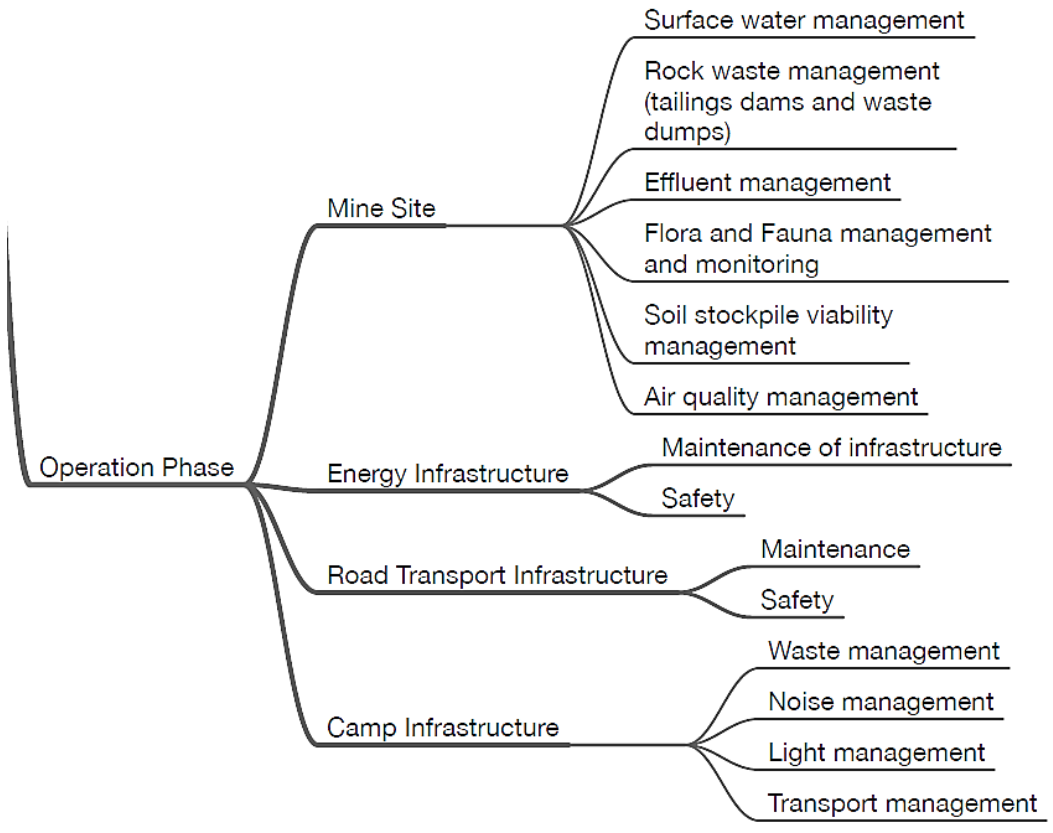
Figure 2.4 shows the differentiated impacts of LSGM mining during each phase of the mining process and activities, starting from exploration, construction, operation, decommissioning, abandonment and closure, and post-closure.



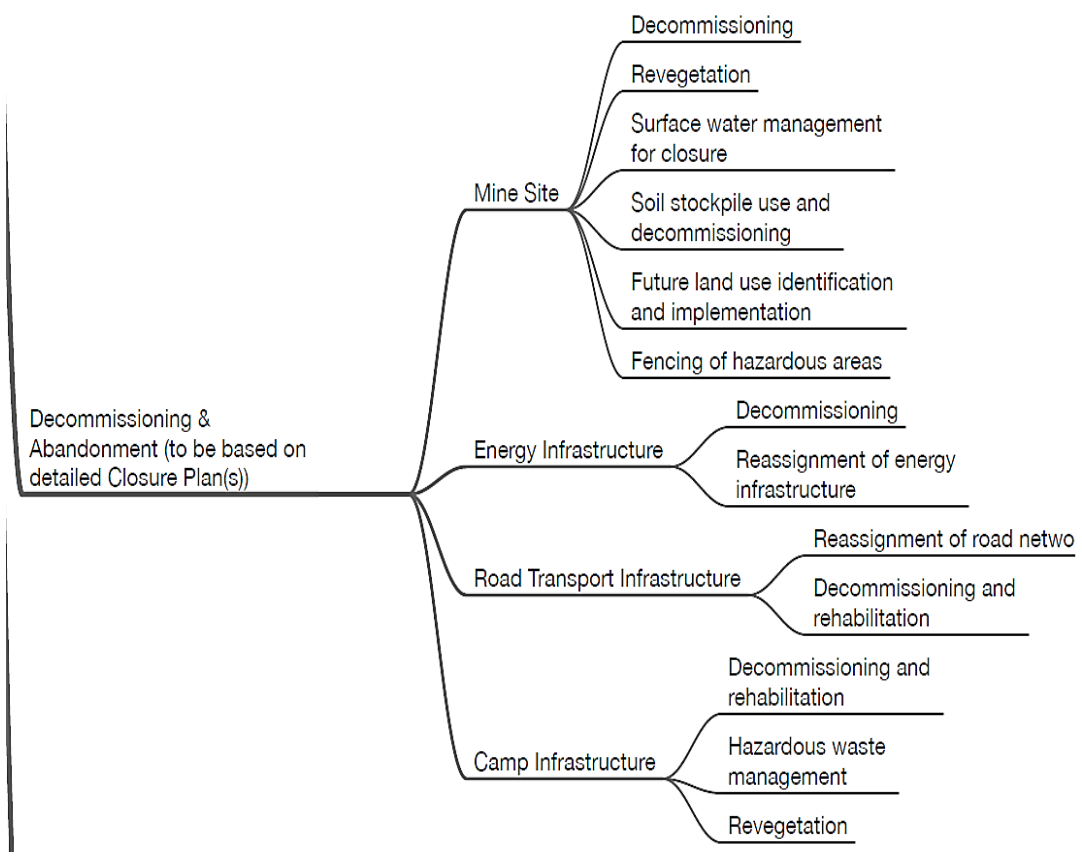
Impacts during exploration phase



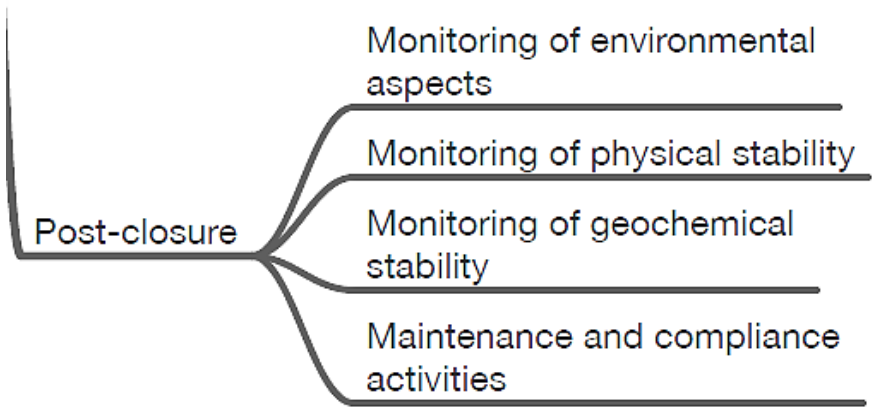
Impacts during Construction phase



Impacts during Operation phase



Impacts during Decommissioning and abandonment phase, and Impacts during post-closure

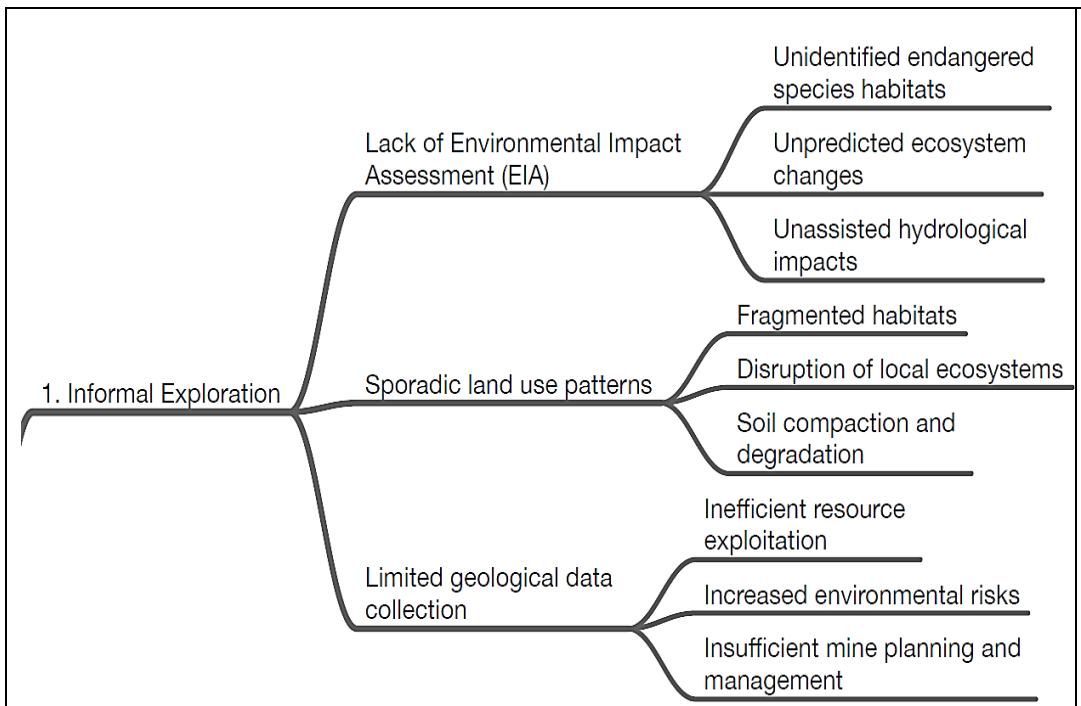


Post-closure requirements

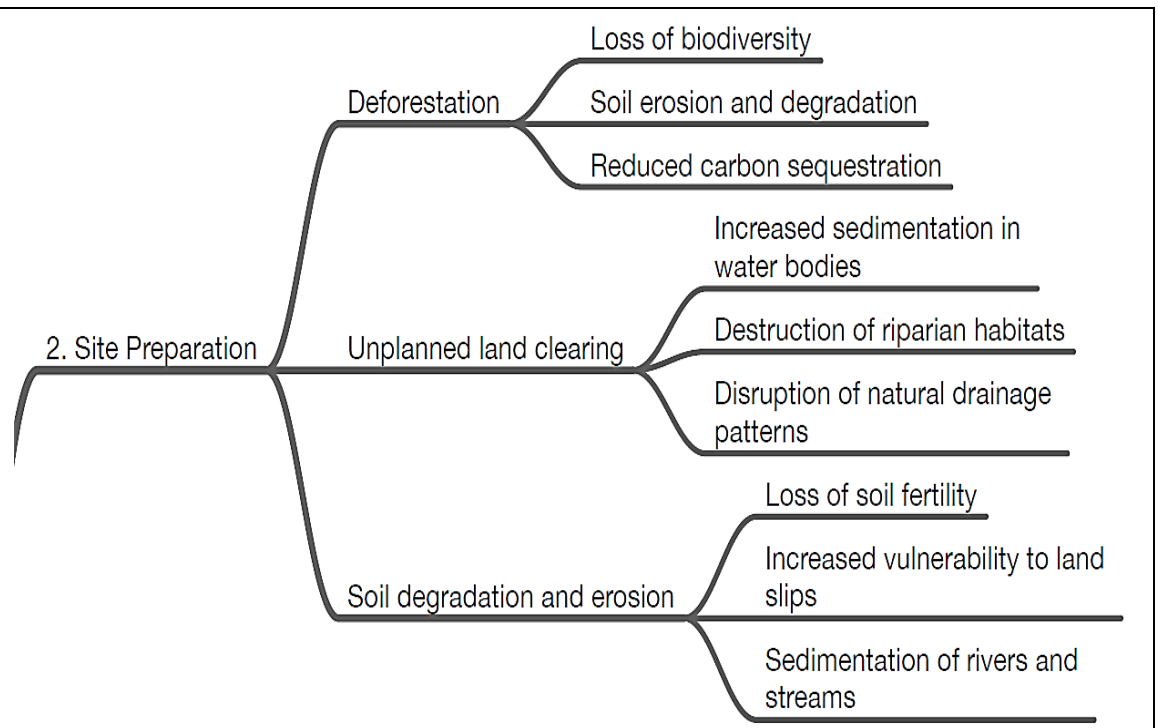
Figure 2.4: Impacts of Large-Scale Gold Mining during the various phases of the mining activities

Source. RINA, 2023

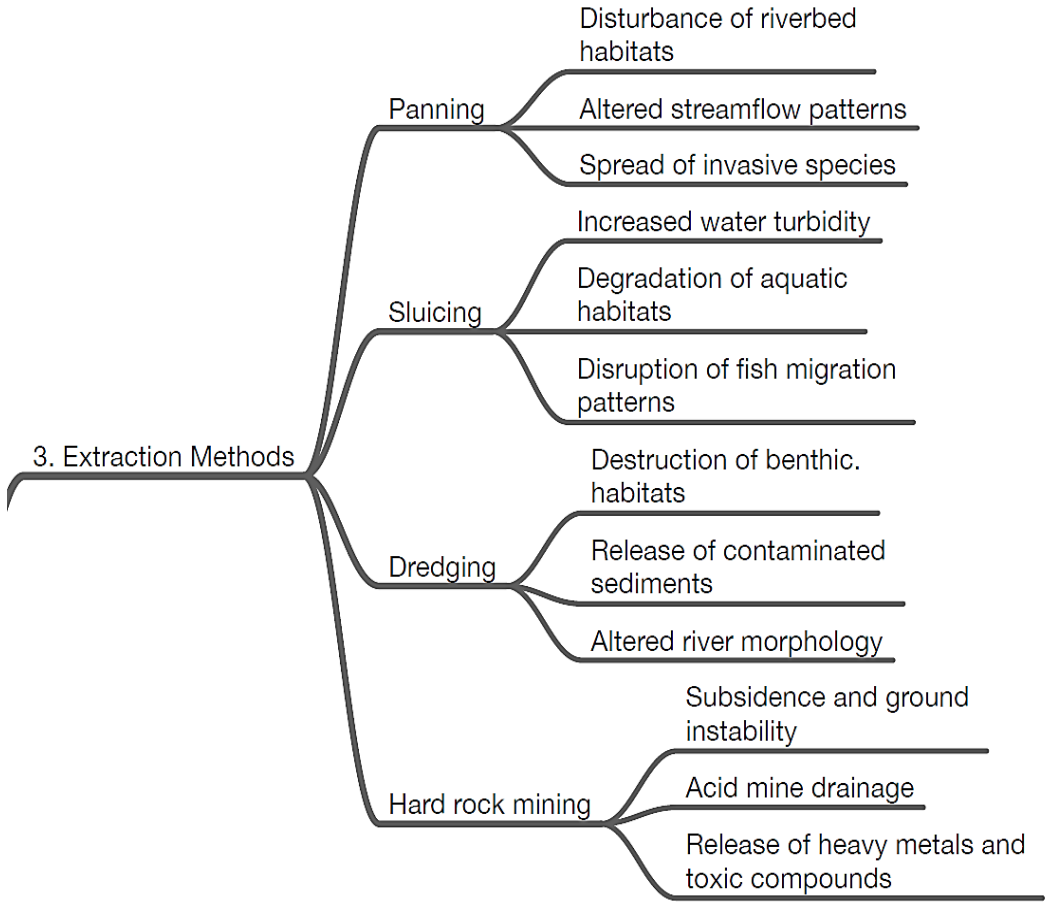
Figure 2.5 shows the Impacts of Artisanal and Small-scale Gold Mining (ASGM) according to its operational aspects starting from informal exploration, site preparation, extraction methods, ore processing, economic and social impacts, labor practices, waste management, regulatory challenges, and site abandonment. .



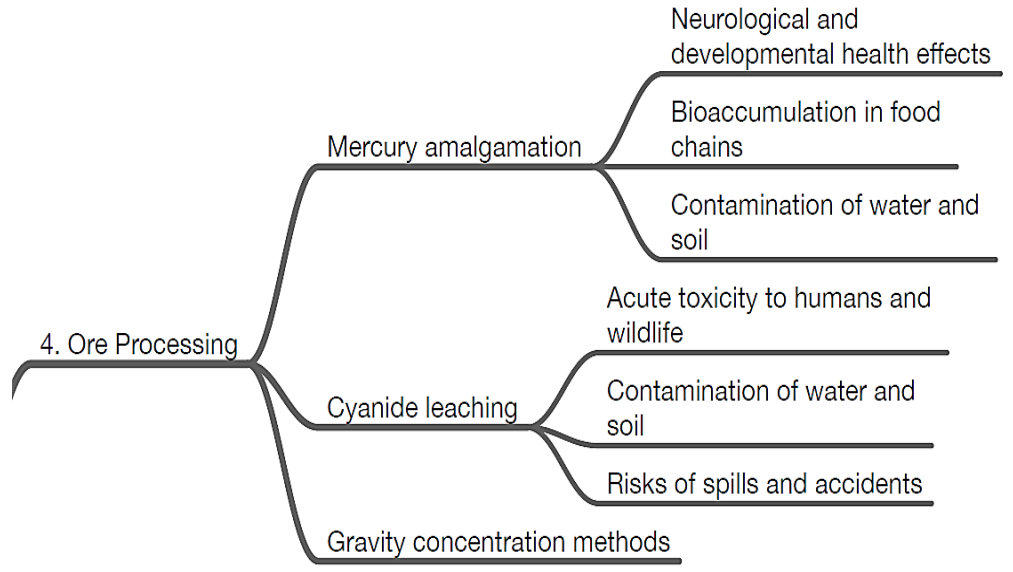
Impacts during exploration



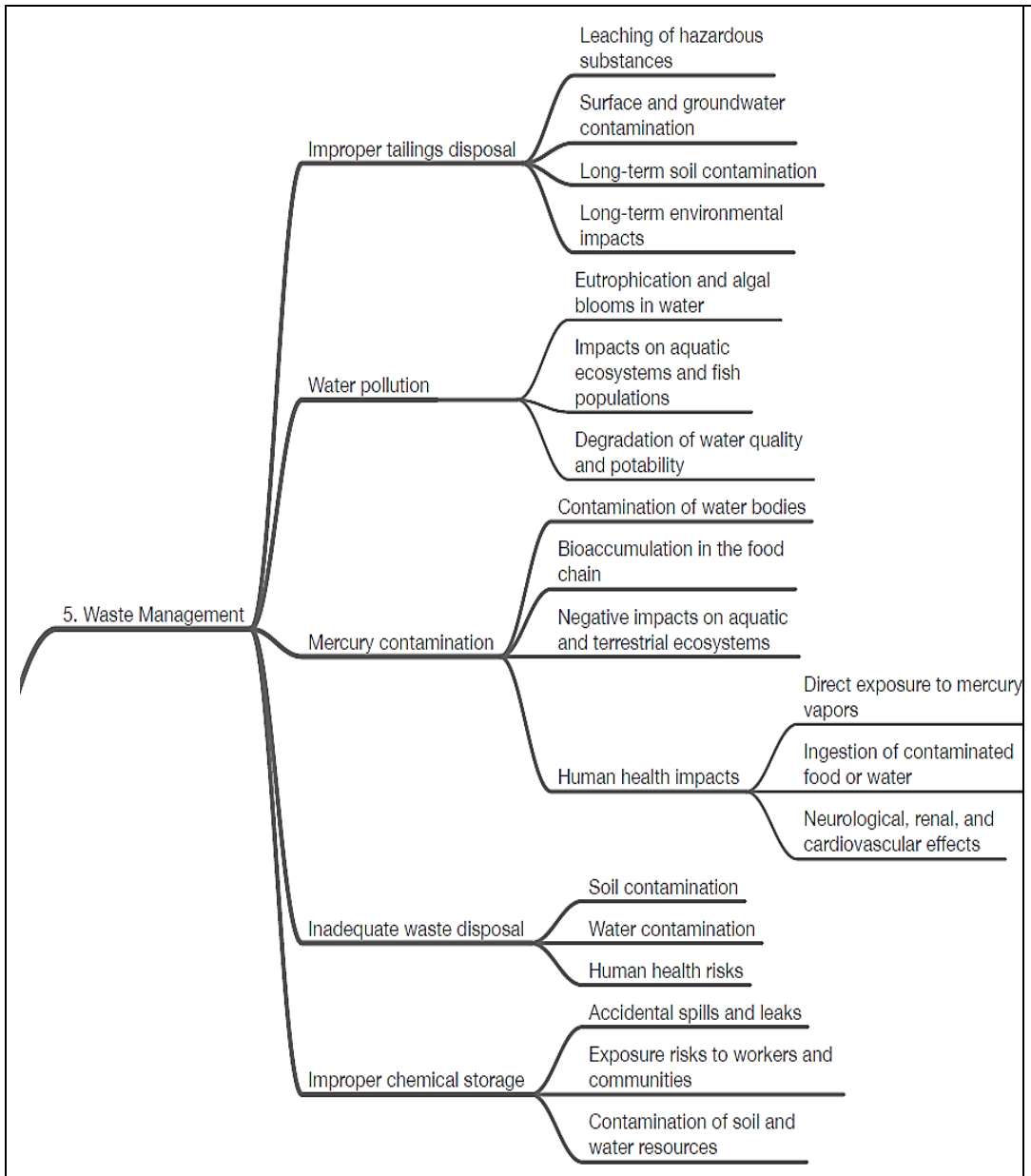
Impacts during Site Preparation



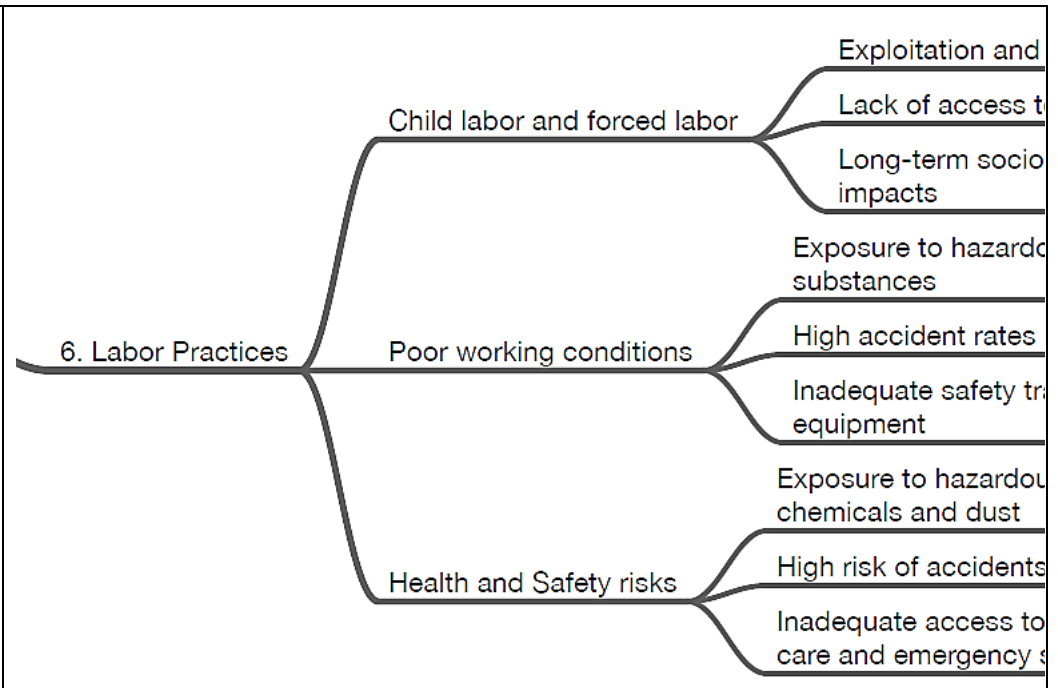
Impacts according to Extraction Methods



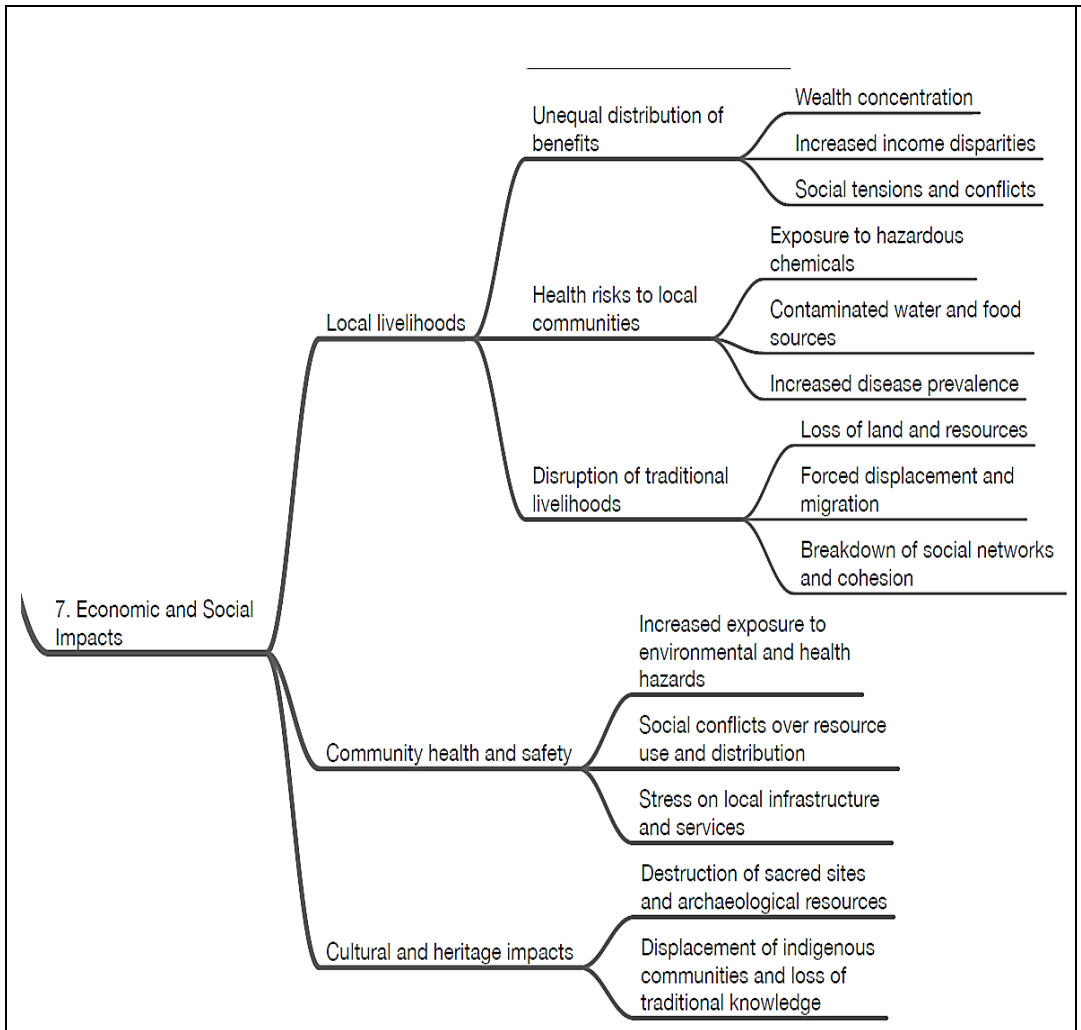
Impacts during Ore processing



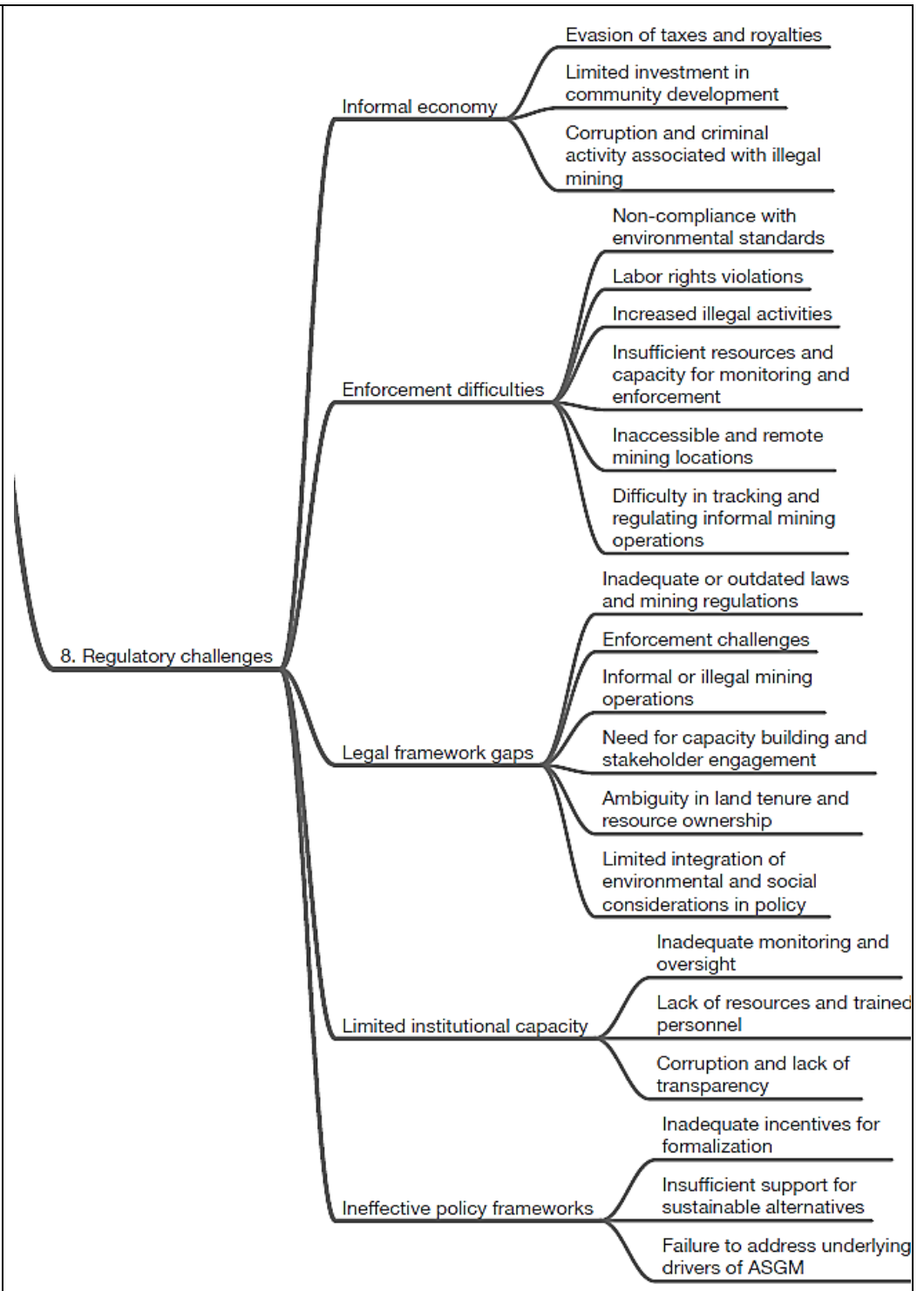
Economic and Social Impacts



Impacts associated with Labor Practices



Impacts related to Waste Management



Impacts related to the Regulatory challenges

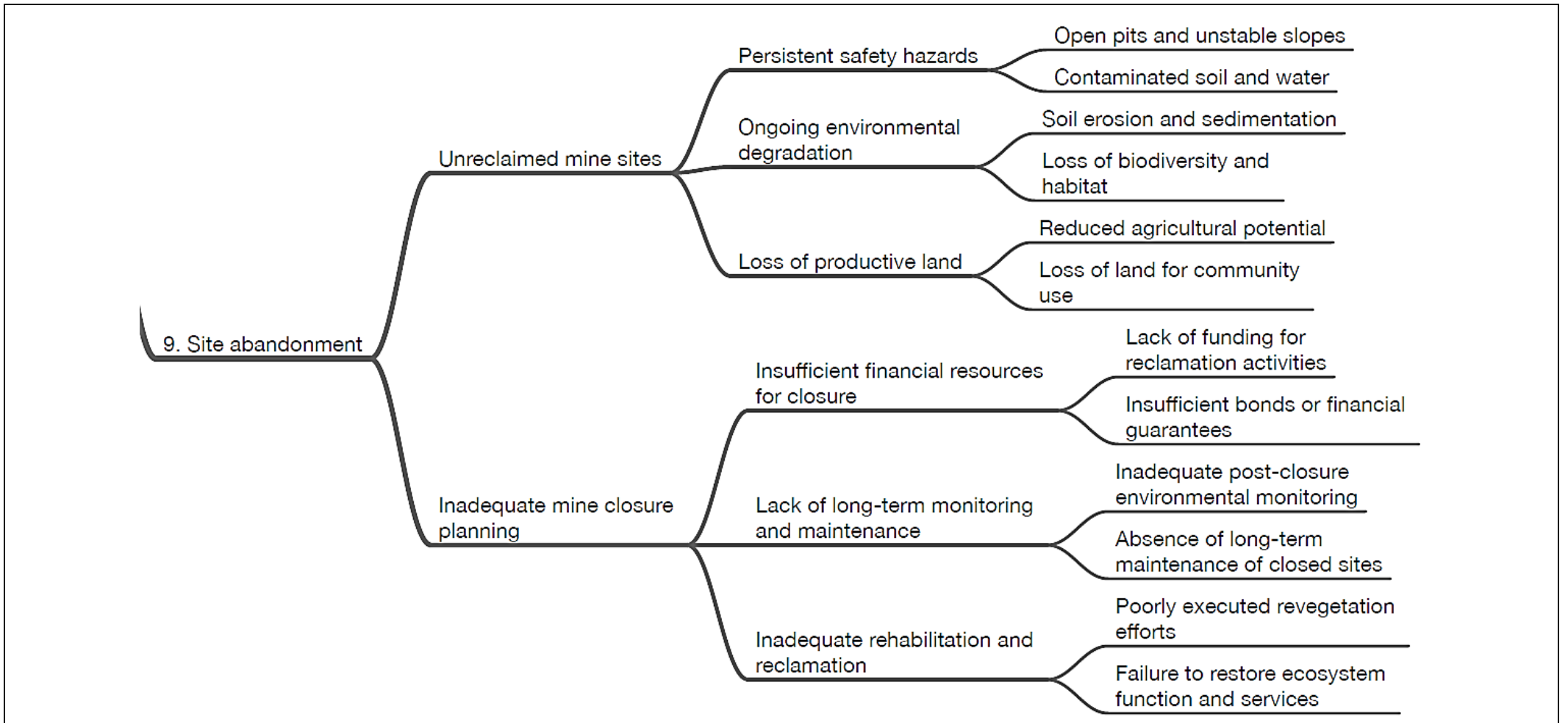


Figure 2.5: Impacts of Artisanal and Small-scale Gold Mining (ASGM) according to its operational aspects

Source: RINA, 2022

As shown in figure 2.5 presented above, ASGM has direct consequences on water quality due to the mercury used during the gold agglomeration process. An independent water quality study should be conducted at national level to verify the extent of the contamination. This study should also verify the presence of contaminants in the local populations. The information could then be used to prioritize the mitigation measures and help communities such as the Erowarte community where the Kaliña & Lokono people are having difficulties selling fish to the French Guyana as the latter fears for mercury and other heavy metal contamination.

Figure 2.6 shows potential water bodies contaminated from ASGM activities upstream.

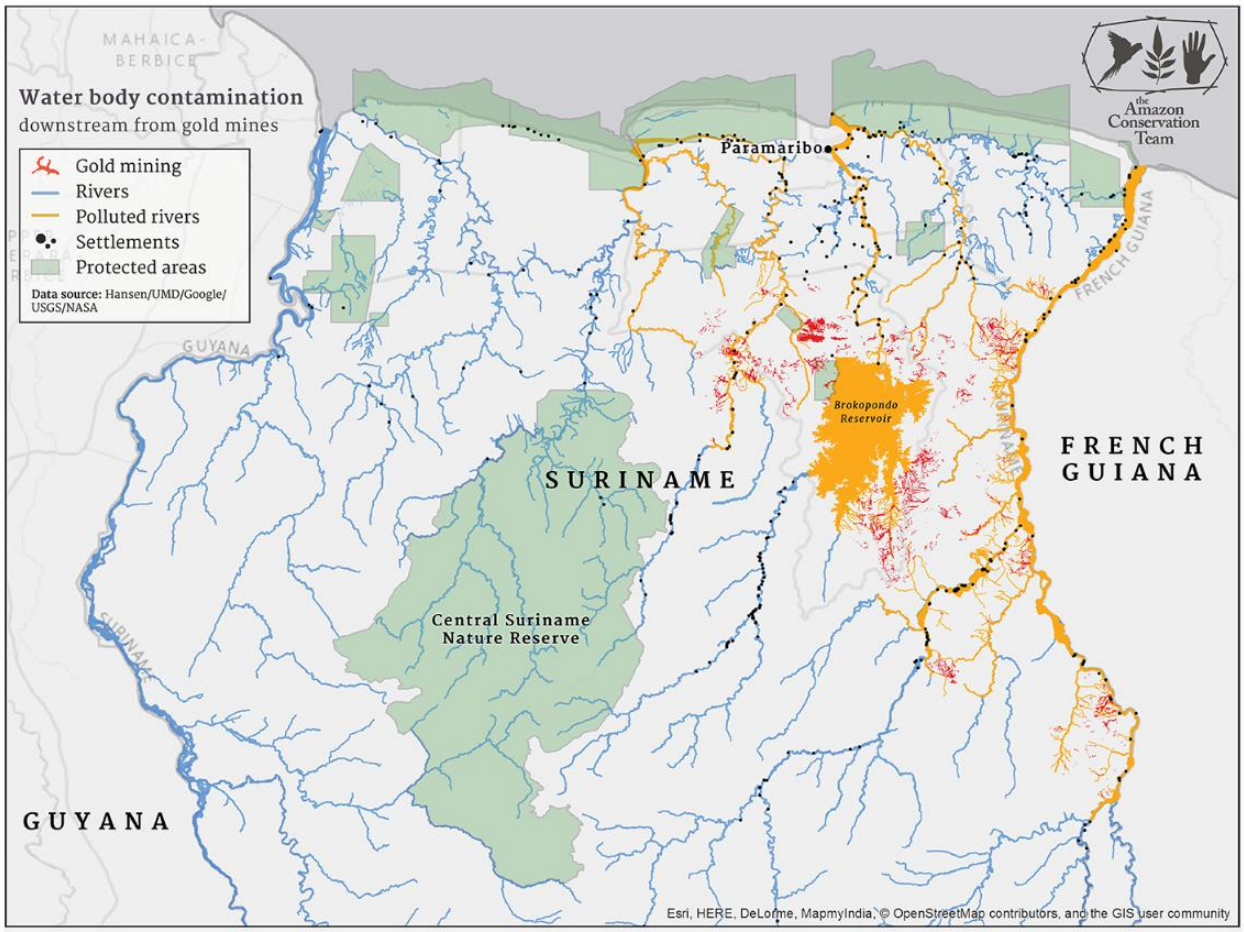


Figure 2.6: Potential Water Bodies Contamination from ASGM activities upstream, ACT

Source: Joshi, 2015

2.2 ENVIRONMENTAL AND SOCIAL IMPACTS

Mining operations can lead to physical disturbance, damage, alteration or contamination of natural ecosystems, degraded soil and subsoil quality and impacts to surface and groundwater quality and quantity with potential consequent effects on vegetation, fauna, aquatic resources, and human health. Mining development scenarios

The relationships between mining activities and environmental and social impacts are further examined in terms of the two identified scenarios mentioned in section 1.8.2.1. However, one can see that there

is little difference between the two scenarios showing similar issues where only the action or mitigation measures need to be addressed more quickly in the accelerated scenario to avoid social conflicts.

BASE CASE SCENARIO AND ACCELERATED TREND SCENARIO

The main sources of environmental and social concerns identified in both the base case scenario and the accelerated trend scenario for mining operations can be summarized as follows:

- Access roads (i.e., air, dust, vibrations, noise, impact on biodiversity, loss of habitat);
- Camp site safety and security (.i.e. Solid waste, wastewater, pests, pesticides/insecticides);
- Agriculture and agro-pastoral (i.e., quality of soil, water, availability of land, deforestation);;
- Air emissions (i.e., from activities, engines, vapors from chemicals);
- Community development (i.e., education, health, telecommunications including cell phone and internet, culture and tradition);
- Encroachment on sensitive areas (i.e., protected areas, sacred areas):
- Interaction with cultural identity of local communities particularly for Indigenous and tribal peoples(i.e., licensing and compensation for the use of Indigenous and tribal occupied land);;
- Land use and land tenure (i.e., especially in relation to land rights of Indigenous and tribal communities);;
- Mining waste production, management and disposal (i.e., solid waste such as tailings, processing wastewater, used chemical);
- Possible synergistic effects with social-environmental impacts resulting from the energy sector;
- Water resources management (i.e., drinking water, rainwater, surface water, groundwater);
- Water and soil contamination (i.e., mercury, cyanide, other chemicals especially with heavy metals)
- Depth of mining and associated detonation;
- Buffer zones between the community and the mining site.

In addition to the above-mentioned concerns, in the case of an accelerated trend scenario, the following issues would need to be addressed:

- Construction of transformation facilities (I.e., for bauxite and gold processing);
- Interaction/overlap of impacts with the energy sector activities; (i.e., oil and gas development that can ensure the required energy for mining activities);
- Water conflicts (i.e., mining is a high consumer of water, and a rapid development may generate competition for water between the mining company and the community).

2.2.1 Social impacts of mining development

Significant social effects may impact the cultural identity and customs of local communities. Several concerns were raised during the visits to the communities and the validation workshops. During the visits to the Indigenous and tribal communities, community leaders and members mentioned that mining activities can have direct impacts on the peoples' livelihood, and this should be taken into consideration. For example, in the Kaliña Lokono locality of Erowarte, people are not directly involved in mining activities. They live off the land and from fishing and hunting. One of the main income-generating activity is selling fish across the river to French Guyana people. Nevertheless, there has been increased preoccupation with the water contamination reducing fish consumption with potential contamination with mercury and other heavy metals. Community members mentioned that some days, they travel across the river and cannot sell the fish, thus wasting time and money associated with travel, while jeopardizing

their livelihood. Another example of social impacts is the rising level of insecurity in some of the communities. For example, in the Wayana Indigenous community located in the extreme south-eastern part of the country, the high influx of *garimpeiros* arriving from Brazil to work in the mining camps is generating insecurity for community members, especially women and young girls. Violence is erupting regularly within the community leading to injuries and even death. Within the tribal communities, employment opportunities are seen as a major concern, along with the impacts of mining waste left on community land, and mine blasting affecting the communities, this due to a lack of existence or respect of the buffer zones. Further information on the social impacts can be found in Appendices C that present findings and minutes of validation meetings.

2.2.2 Risks of encroachment on sensitive areas

Encroachment on sensitive areas occurs during mining development. Sensitive areas include protected areas such as national parks, and also sacred areas such as cemeteries and cultural heritage areas. These areas should be well documented and agreed between GOS and Indigenous and tribal authorities. Cultural properties are regulated through the Monuments Act 2002, but it only refers to tangible monuments. The Act provides for a brief procedure on findings of artifacts regarding declaration and transfer. Nevertheless, during the community meetings, community members mentioned that that some of the sensitive areas were not properly documented. These areas should be verified, and the maps updated. Participatory mapping with the local communities would allow the updating of sensitive and tribal and Indigenous territorial maps and would reduce the risks of encroachment on sensitive areas.

Figure 2.7 shows a map of protected areas of Suriname, locations that should be no-go areas for mining activities. Other sensitive areas are not included in this map.

Figure 2.7: Map of Protected Areas

Source Centre for Agricultural Research in Suriname (CELOS)

3 MITIGATIONS AND MONITORING MEASURES

3.1 MITIGATION OF ENVIRONMENTAL AND SOCIAL IMPACTS

Mitigation measures to reduce environmental and social risks must be applied for every phase of the mining activities that generate various and specific impacts according to the operational aspects of the activities, which were presented in the previous chapter, specifically in figures 2.2, 2.3, 2.4 and 2.5. The mining sector should draw on internationally recognized good practice standards and Guidance for the corresponding mitigation measures, for example, the International Finance Corporation's (IFC) 2012 Environmental and Social Performance Standards, the World Bank Group Environmental, Health and Safety (EHS) Guidelines, IFC Environmental, Health and Safety Guidelines for Mining[7], the Environmental and Social Standards of the World Banks ESF (2018), and the ILO Conventions C097, C102, C143..

3.1.1 Mitigation and safeguards for Large-Scale Gold Mining

The management of Large-Scale Gold Mining (LSGM) in Suriname should focus on the following broad set of safeguards based on a prioritization of the specific environmental, social and sustainability risk profiles that they confront:

- International Standards: LSGM in Suriname is typically overseen by corporations that should adhere to international standards like the Equator Principles, International Cyanide Management Code, and the standards set by the International Finance Corporation (IFC). These are generally defined by their contractual conditions as signed with the GOS, and the commitments described in the Environmental Impact Assessment for the project; these are frequently required in order to achieve financing for the project.
- Environmental Impact Assessment (EIA): Any large-scale mining activity is typically subject to an Environmental Impact Assessment (EIA) under the national mining law of Suriname. Suriname should ensure that Mining Corporations adhere to all international commitments set out in the various ratified conventions for the protection of biodiversity[8]
- Upholding Rights of Indigenous and Tribal Peoples: Ensure that the draft Collective Rights Act, which was submitted to Parliament for discussion, complies and continues to comply with the fundamental collective rights of Indigenous Peoples of Suriname as laid down in the UN Declaration on the Rights of Indigenous Peoples. To this day, Suriname has not ratified the ILO Convention 169. Ratification of this Convention has been suggested for years, but it is the prerogative of the Government to decide which convention to ratify. A draft law has been presented to parliament for its approval.
- Commitment to Best Practices: An essential feature of sustainable LSGM is the implementation of best practices including seeking Free, Prior and Informed Consent (FPIC) from local communities, adopting biodiversity offsetting where feasible, restoring mined areas, and ensuring the equitable sharing of benefits from the use of genetic resources, in line with the Nagoya Protocol. FPIC should follow the local *krutu* process for Indigenous and tribal communities, process explained in section 1.9.1. IP Approach.

[7] https://www.ifc.org/wps/wcm/connect/595149ed-8bef-4241-8d7c-50e91d8e459d/Final+-+Mining.pdf?MOD=AJPERES&CVID=jqezAit&id=1323153264157

[8] A Matrix on laws, policies and MEAs is included in Annex G.

3.1.2 Mitigation and safeguards for Bauxite mining

The management of Bauxite Mining in Suriname should focus on the following broad set of safeguards based on a prioritization of the specific environmental, social and sustainability risk profiles that they confront:

- Environmental Risks Mitigation: Bauxite mining operations must align with the Equator Principles, specialized occupational health risk guidelines, and IFC/World Bank Performance Standards on Environmental and Social Sustainability World Bank Group Environmental, Health, and Safety (EHS) General Guideline, EHS Environmental, Health and Safety Guidelines for Mining. Moreover, the carbon-intensive nature of bauxite processing necessitates strict compliance with the Paris Agreement to mitigate the impact on climate change.
- Sociocultural Safeguards: Comprehensive Environmental Management Plans (EMP's), underpinned by mandatory Environmental Impact Assessments, must be developed and executed. Additionally, respect for the rights and lands of Indigenous and tribal populations should be upheld in all operations through the development and use of IP-specific instruments such as following the WB standards and guidelines, in accordance with the local *Krutu*, approve and implement the ILO Convention 169, among others.
- Sustainability Best Practices: Implementing recognized best practices such as prior consultation, seeking FPIC, biodiversity offsetting, restoration of mined areas, and the equitable sharing of benefits derived from genetic resources, as outlined in the Nagoya Protocol, are essential for sustainable bauxite mining.

3.1.3 Mitigation and safeguards for Artisanal Small-scale Gold Mining

The management of ASGM in Suriname is a complex issue and ideally requires a multisectoral approach to achieve valid outcomes. However, the mining sector should focus on the following broad set of safeguards based on a prioritization of the specific environmental, social and sustainability risk profiles that ASGM confronts:

- Environmental Risks Mitigation: Compliance with the Minamata Convention is vital given the prevalent use of mercury in ASGM, which poses significant health and environmental risks. Moreover, adherence to UNEP's guidelines on mercury management should be enforced.
- Sociocultural Safeguards: ASGM operations must align with the regulatory framework outlined by Suriname's national Mining Decree and respect the rights and lands of Indigenous and tribal populations, in accordance with international law.
- Sustainability Best Practices: The adoption of best practices, such as seeking FPIC, biodiversity offsetting, restoration of mined areas, and equitable benefit-sharing in line with the Nagoya Protocol, is pivotal for the sustainable conduct of ASGM.

In order to stand any chance of success, both the ASGM and LSGM sectors' environmental, social and sustainability safeguards should be couched in the context of a comprehensive policy approach, necessitating harmonization across sectors, integrated land use planning, institutional capacity enhancement, formalization of the ASGM sector, health and safety provisions, education, socio-economic support, and stakeholder engagement. This cross-sectoral, collaborative strategy, involving various governmental departments, agencies, and stakeholders, is crucial for addressing the multifaceted challenges associated with ASGM and promoting its sustainable development.

3.1.4 Suggestions to minimize environmental and social risks

The following are suggestions on the Environmental and Social Risks of the various mining sectors that could be implemented or strengthened. It is understood that some of these suggestions are part of ongoing initiatives and have been included in the Action Plan:

- ✓ Land Rights Considerations:
  - Enact legislation to clearly define land rights and usage for both individual and corporate entities, respecting the rights of Indigenous and tribal populations.
  - Strengthen the capacity of national institutions to enforce land rights laws, carry out inspections, and penalize non-compliance.
  - Encourage participatory land-use planning, ensuring that local communities have a meaningful voice in decisions that affect their lands and livelihoods.
- ✓ Strengthening Regulatory Compliance:
  - Implement the new mining act. The Mining Act 1986 is outdated, and the Ministry of Natural Resources is currently preparing a modernized Mining Act. The new Mining Act needs to be implemented, as it should be aligned with global standards that include, as a minimum, such standards as the Equator Principles, International Cyanide Management Code, the Minamata Convention on Mercury, and the World Bank Group's Environmental, Health, and Safety Guidelines.
  - Establish or strengthen an independent regulatory body with authority to monitor compliance, carry out inspections, and enforce penalties for non-compliance.
- ✓ Mandatory Environmental and Social Impact Assessments (ESIAs):
  - Mandate comprehensive ESIAs for all mining projects and make their approval a precondition for mining permits.
  - Develop a comprehensive EIA guideline document detailing the methodologies required for assessing impacts such as deforestation, habitat loss, soil erosion, water pollution, and community displacement.
- ✓ Conservation of Biodiversity:
  - Enact legislation to ensure that mining activities do not threaten areas of high biodiversity and protected areas.
  - Establish a Biodiversity Offsetting Fund, to which mining companies contribute, to support conservation initiatives and compensate for any unavoidable damage.
- ✓ Sociocultural Safeguards:
  - Engage stakeholders, especially communities close to the mining operations.
  - Develop a national law that enshrines Free, Prior and Informed Consent (FPIC) principles into mining operations drawing on the WB's Indigenous People Planning Framework (IPPF) and/or the WB's Indigenous People's Plans (IPPs) while respecting the local krutu.
  - Facilitate capacity building workshops for Indigenous and tribal communities to enhance their ability to participate in decision-making processes related to mining activities.
- ✓ Sustainable Mining Practices:
  - Promote the use of green technologies in mining, such as cleaner production techniques and renewable energy.
  - Implement a national policy on post-mining land-use planning to ensure mined areas are restored and can contribute to local sustainable development.
- ✓ Comprehensive ASGM Approach:
  - Develop a national ASGM policy that includes guidelines for formalization, access to finance, technical assistance, and health and safety.
  - Establish dedicated ASGM zones where artisanal miners can operate legally and receive governmental support.

- ✓ Collaborative Efforts:
  - Establish a multi-stakeholder committee on responsible mining with representation from government, mining corporations, local communities, and civil society.
  - Develop a national mining data portal that provides accessible and transparent information about mining activities, compliance, and impacts.

Many of the environmental impacts discussed previously can be avoided or minimized through the implementation of an appropriate legal and regulatory framework. The success of the SESA to manage the environmental and social impacts from mining development can be measured as a function of the government's ability to put in place the necessary regulatory and control mechanisms for enforcing and governing how mining development will occur. Initially, the regulatory and institutional framework needs to be revised, approved and implemented.

In Suriname, there are currently no discharge standards for emissions into air, water and soil, these need to be established and applied to the mining sector. This has to be coupled with private sector initiatives towards the implementation of best practices already adopted in other mining countries, and better control of the illegal and ASM activities in the country.

Table 3.1 outlines the general environmental and social risks associated with large-scale gold mining (LSGM), artisanal and small-scale gold mining (ASGM) and bauxite mining in Suriname. They identify potential issues and concerns for each risk, as well as relevant mitigation guidelines and national and international conventions, policies, laws, and regulations considered to be aligned with current best-practice.

Table 3.1: Suggested guidelines to mitigate Environmental and Social Risks from Mining

Environmental and Social Risks	Potential Issues and Concerns	Suggested mitigation guidelines
Deforestation and habitat loss and fragmentation	Destruction of critical habitats and ecosystem disruption Loss of biodiversity Carbon emissions	Update and implement Suriname National Biodiversity Strategy and Action Plan (2013). Specific focus should be laid on the following aspects: ✓ Sustainable land management ✓ Reforestation ✓ Suriname Nature Conservation Act (1954) ✓ Update of definitions for protected areas and buffer zones to preserve protected areas (Update SNCA). Adhere to all Multilateral Environmental Agreements ratified by Suriname Draw on WBG Environmental, Health and Safety Guidelines for Mining (2007) for appropriate mitigation measures. Introduce Precautionary Principle in the legislative framework regarding mining sites and conditions, the same should be suspended until measures are taken to avoid negative impacts. ESS6 under the WB ESF 2018. Enforce the Environmental Framework Act 2020, Nature Conservation legislation and Forest Management Act
Soil erosion and degradation	Loss of topsoil, increased erosion Degradation of agricultural land Sedimentation of water bodies	Adhere to the UN Convention to Combat Desertification Control erosion, preserve topsoil, and revegetate through regulatory framework

Environmental and Social Risks	Potential Issues and Concerns	Suggested mitigation guidelines
		Establish discharge standards with clear limits to be applied to the mining sector. Draw on IFC Environmental, Health and Safety Guidelines for Mining (2007)
Water contamination (chemicals and heavy metals, sediments)	Contamination of water sources including those used by communities (potable water, bathing, recreation) Impacts on aquatic life	Approve the Draft Water laws by Parliament Groundwater protection, drinking water quality, groundwater protection areas and surface water management. Enforce the Environmental Framework Act 2020, including promulgation of subsidiary regulations on Pollution Control, specifically Water discharge standards Adhere to Multilateral Agreements ratified by Suriname. Establish discharge standards with clear limits to be applied to the mining sector. Draw on the IFC Environmental, Health and Safety Guidelines for Mining (2007) Draw on the WB ESS6 under WB ESF 2018 for mitigation measures.
Red mud disposal	Soil and water contamination, hazardous waste	**Bauxite Mining should adopt the following:** Enforce the Environmental Framework Act 2020, specifically promulgation of the required subsidiary regulations on Hazardous substances and waste. Establish discharge standards with clear limits to be applied to the mining sector. Draw on the WB ESS3 under WB ESF 2018 for mitigation measures.
Climate change	Increase in greenhouse gas concentrations	Adhere to the commitments under the United Nations Framework Convention on Climate Change and the Paris Agreement Implementation of REDD + strategy Draw on the WB ESS3 under WB ESF 2018 for mitigation measures..
Cyanide and mercury pollution	Toxic contamination, human health risks (workers and local communities) Environmental contamination Mercury not generally used in LSGM but has potential to have been used in previous ASGM mining on and around the mine site, and in on-going ASGM activities	**LSGM should adopt the following:** Promulgate Draft Pollution Control regulation under the Environmental Framework Act. This includes i.e., safe chemical handling, proper waste disposal and monitoring Draw on the IFC Environmental, Health and Safety Guidelines for Mining Adopt international standards such as Cyanide Code at each project Adopt ILO Convention 176 on Safety in Mines

Environmental and Social Risks	Potential Issues and Concerns	Suggested mitigation guidelines
		Establish a baseline of mercury contamination within the EIA for the project **ASGM should adopt the following:** : Implement the Minamata roadmap Adopt the ILO Convention 176 on Safety in Mines Draw on the IFC Environmental, Health and Safety Guidelines for Mining Include the WB ESS3 under WB ESF 2018.
Cumulative impacts	Long-term negative effect on the environment and society and ensure associated facilities are considered in impact assessments	Conduct an evaluation and ensure monitoring of cumulative impacts for future investments in the mining sector as a mitigation measure. Use the IFC Cumulative Impact Assessment Guidelines.
Community health and safety	Health risks from accidents, noise, dust and chemical exposure, including mercury and cyanide	Enforce occupational health and safety legislation at mine sites. Establish discharge standards with clear limits to be applied to the mining sector. Parliament approval of draft Occupational Health and Safety Act 2019, Adopt ILO Convention 176 on Safety in Mines Apply the IFC Environmental, Health and Safety Guidelines for Mining (2007) Draw on the WB ESS4 under WB ESF 2018. Implement Minamata Roadmap
Community displacement	Disruption of livelihoods, loss of social networks	Develop legislation for Suriname addressing Involuntary Resettlement drawing on WB ESS5 under WB ESF 2018.
Labor issues	Poor working conditions, occupational health and safety risks, child labor, forced labor, inadequate wages, and benefits. Issues related to gender-based violence in and out of the workplace	Enforce current Labor legislation in mining areas and Parliamentary approval of draft Occupational Health and Safety Law taking in account ratified Labor Conventions Ratify the other ILO Conventions (C097, C102, C143. Apply IFC Environmental, Health and Safety Guidelines for Mining (2007) where national legislation is absent or less stringent. Comply with UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW):

Environmental and Social Risks	Potential Issues and Concerns	Suggested mitigation guidelines
		Comply with OAS Inter-American Convention on the Prevention, Punishment, and Eradication of Violence against Women (Convention of Belem do Para): Include UN Sustainable Development Goals in the strategies: ✓ Gender equality ✓ Reduction of violence against women Draw on WB ESS2 under WB ESF 2018.
Unequal distribution of benefits amongst stakeholders	Local communities and workers not benefiting adequately from mining revenues Social tensions, conflicts	Align Suriname's policy and legislation with UN Declaration on the Rights of Indigenous Peoples (UNDRIP) (voted for adoption in 2007): Comply with IFC Performance Standards As a member of the extractive Industries Transparency Initiative (EITI), review the implementation of transparent, accountable management of natural resources Align Suriname's Policy and legislation to comply with the Convention on Biological Diversity (CBD) (ratified 28 March1996) and Nagoya Protocol (not ratified): ✓ Conservation of biological diversity, community development initiative WB ESS6 under WB ESF 2018. ✓ Sustainable use of diversity components, National Biodiversity Strategy ✓ Equitable revenue sharing, including from the use of genetic resources
Indigenous and tribal communities	Potential infringement on the rights, lands, resources, and cultures of Indigenous and tribal communities Loss of identity, culture, and customary livelihoods. Exposure to disease.	Adopt Suriname's Policy and legislation to align with the UN Declaration on the Rights of Indigenous Peoples. Prepare an Indigenous and Tribal Peoples' Plan (ITPP). Apply FPIC with GOS oversight, drawing on WB ESS7 and WB ESS10 under WB ESF 2018.
Cultural and heritage impacts	Potential damage to cultural and heritage sites	Enforce and modernize Suriname National Heritage Law drawing on WB ESS8 under WB ESF 2018. Adhere to the UNESCO Convention on the Protection of the World Cultural and Natural Heritage. Introduce precautionary principle into legislation to avoid irreparable dagames. Establish no go zones in the proximity of cultural heritage areas

Source: RINA, 2022

Furthermore, the International Financial Corporation (IFC, member of World Bank Group) released The Environmental, Health and Safety Guidelines for Mining[9]. IFC's Environmental, Health, and Safety guidelines for mining include information relevant to the applicability of the guidelines, industry-specific impacts and management including EHS issues associated with mining activities during ore processing, exploration, development, construction, operation, closure, decommissioning, and post-closure. It addresses subjects such as potential environmental issues associated with mining activities such as water use and quality, wastes, hazardous materials, land use and biodiversity, air quality, noise and vibrations, energy use and visual impact. It helps identify occupational health and safety hazards including recommended strategies to manage general workplace safety hazards, hazardous substances and the use of explosives. It addresses electrical safety and isolation, physical hazards in mining activities and ionizing radiation, among others. The guidelines further review community health and safety issues that may be associated with mining activities and review mine closure and post-closure activities. Finally, the document proposes indicative emissions and effluent guidelines for the mining sector, environmental monitoring strategies, and occupational health and safety strategies based on international standards. The adoption and application of the IFC guidelines can be a positive first step for Suriname to help minimize risks associated with mining activities and develop the national regulatory framework.

3.2 MONITORING MEASURES

Monitoring is a key element to verify the efficiency of implemented mitigation measures that can provide a reduction or elimination of the negative impacts. In-house monitoring strategies can be used, drawing on international standards and good guidance such as the European Strategic Environmental Assessment Directive which states that the authority should "monitor the significant environmental effects of the implementation of plans and programs in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action" [10],or on other guidelines such as World Bank, IFC or ILO, to name only a few.

Monitoring the actual impacts of a strategic action aims:

- ✓ To test whether the strategic action is achieving its objectives and targets;
- ✓ To identify negative impacts – predicted and not predicted – requiring remediation;
- ✓ To help ensure that mitigation measures proposed in the SESA are implemented; and
- ✓ To give feedback that can be used to predict impacts in future social and environmental studies.

Monitoring also provides the opportunity to examine and analyze the implementation phase of the policy development and to measure its level of success. A coordinated environmental and social monitoring program must be established for the ongoing assessment of the environmental and social impacts of mining on marine and terrestrial ecosystems, especially focusing on soil, subsoil, surface water and groundwater, and on social impacts according to the following targets:

- Ensure the generation of information allowing the assessment against the SESA environmental and social for the elaboration of a baseline indicating environmental and social effects of the mining sector policy reform;
- Include activities that identify the causes of changes and implement the corrective measures needed to restore or improve the environmental and social status;

[9] https://www.ifc.org/wps/wcm/connect/595149ed-8bef-4241-8d7c-50e91d8e459d/Final+-+Mining.pdf?MOD=AJPERES&CVID=jqezAit&id=1323153264157

[10] European SEA Directive 2001/42/EC Article 10.

- Provide information on chemical contaminants in fish species used for human consumption;
- Confirm the corrective measures deliver the desired changes and not some other unwanted side effects;
- Develop technical specifications and standardized methods to allow comparability of information;
- Ensure, as far as possible, compatibility with existing programs developed at the national, regional and international level, with a view to fostering consistency and complementation between these programs as to avoid duplicated efforts;
- Assess major changes in the environmental and social conditions as well as, where necessary, new and emerging issues;
- Monitor specific environmental indicators to be set out on the basis of the following requirements:
  - Control management measures that influence the amount of mining related activity;
  - Control management measures that influence the degree of perturbation of an ecosystem component; and
  - Control management measures that influence spatial and temporal distribution of mining activities.

A good monitoring program is highly dependent on institutional and technical constraints. In fact, general constraints and limitations in resources, personnel and equipment, data reporting and data management may represent the major issues hindering the proper implementation of an effective environmental monitoring program. A specific agency or institution must take the responsibility for the monitoring and follow-up of mining activities and its environmental impacts in the country. An adequate and effective monitoring program can only be designed once the institutional and technical limitations have been fully addressed, and its personnel capacitated in monitoring.

3.2.1 Responsibility

The to-be-created National Environment Authority (NMA) represents the ideal responsible authority for implementing a monitoring program regarding all environmental compliance, and for managing environmental data. Unfortunately, the establishment of the NMA is still in process, leaving NIMOS as the current responsible agency

In order to ensure that an efficient monitoring program is available in the short-term, at least until an efficient monitoring unit within the NMA is operational, it is essential that NIMOS identifies the necessary resources for the management of environmental monitoring issues as soon as possible.

The MNR is the most appropriate agency to be responsible for monitoring all mining related issues, and be empowered to coordinate, integrate and, if needed, expand the roles and responsibilities of a technical team formed by personnel belonging to different institutions and organizations. MNR should also identify the necessary funding for monitoring operations as well as presentation and dissemination of monitoring results related to mining projects and activities.

In turn, the technical team is to be responsible for identifying suitable environmental and social indicators (see section 3.3.2), designing the monitoring program and carrying-out field observations and measurements where required, analyzing and evaluating collected data, and producing monitoring reports.

3.2.2 Environmental and social indicators

Environmental and social indicators are simple measures that show what is happening in the environment and society, providing a practical and economical method of tracking the state of the environment and society without having to record every possible variable.

Indicators can work as a basis for assessment by providing information on sustainable development conditions and trends. Indicators can also provide inputs to policy formulation processes. The use of indicators facilitates the understanding of data, presenting one representative number rather than complex statistics, thus facilitating communication between groups with different academic and economic backgrounds, especially between government and stakeholders.

The purpose of indicators is to indicate a change – not necessarily to disclose all aspects behind a change. They generally compare a situation at a specific point in time, compared with a baseline prepared in the past yet at a specific point in time. Many different types of indicators have been developed ranging from qualitative to quantitative. They can be used to reflect a variety of systemic aspects, environmental and social aspects, including biological, chemical and physical aspects. Due to this variety, the development and selection of appropriate indicators is a complex process.

3.2.2.1 Indicator selection criteria

There is no universal set of indicators that is equally applicable for all case scenarios. However, it is recommended to select a small set of well-chosen indicators that can give representative information regarding the monitored issues. There are a number of selection criteria that can be applied when narrowing down the number of indicators. The selection criteria ensure that the indicators provide useful information to be used by decision makers. The selection of indicators must be linked to the monitored issues, based on a clearly defined objective and understanding of the problem at hand.

3.2.2.2 Proposed indicators

The following presents a set of proposed environmental and social indicators for key issues selected on the basis of the SESA outcomes upon which a monitoring program should be framed. Table 3.2 shows some examples of key environmental and social impacts associated with mining in Suriname. The proposed indicators are associated with identified preliminary, operational control and mitigation measures to be taken for the priority impacts associated with mining activities. It provides a preliminary overview of the potential risks and concerns that should be addressed by the GOS to ensure sustainable development of the mining sector.

Table 3.2: Operational control indicators and mitigation measures

Environmental and Social Impacts	Preliminary Indicators	Preliminary Mitigation Measures	Preliminary Operational Control and Key Performance Indicators (KPIs)[11]
Deforestation	Habitat loss, reduced biodiversity, increased greenhouse gas emissions	Reforestation, sustainable land management, minimizing land disturbance	• Reforestation rate • Change in local biodiversity levels • Levels of greenhouse gas emissions
Soil erosion	Sedimentation affecting nearby water bodies	Erosion control measures, revegetation, proper waste management Implementation of soil erosion and conservation standards	• Erosion control measures implemented • Change in soil quality measures

[11] The values for each indicator will be developed by the MNR, NIMOS and other organizations as required. This will be done during the implementation stage.

Environmental and Social Impacts	Preliminary Indicators	Preliminary Mitigation Measures	Preliminary Operational Control and Key Performance Indicators (KPIs)[11]
			• Progress in soil conservation plans
Water pollution	Contamination of surface and groundwater sources	Proper waste disposal, water quality monitoring, water treatment systems Implementation of discharge standards for water	• Water quality and quantity (surface and groundwater) • Efficiency of water discharge treatment systems
Air pollution	Emissions affecting air quality and human health	Dust suppression, proper waste management, air quality monitoring Implementation of air emission standards	• Air quality measures (concentration of contaminants) • Degree of air emission standards compliance
Noise pollution	Impacts on nearby communities and wildlife	Noise control measures, limiting working hours, maintaining buffer zones. Implementation of noise standards	• Noise level measurements in nearby communities and wildlife habitats.
Social conflicts	Conflicts over land use and local resources Community safety Stakeholder engagement	Community engagement, fair compensation, conflict resolution mechanisms, grievance mechanism. Stakeholders must be involved from the beginning.	• Number of grievances and complaints filed / resolved. • Number of crime or violence cases reported. • Number of stakeholders attending meetings • Number of suggestions integrated in project design received during consultations.
Economic dependency	Vulnerability to global bauxite price fluctuations	Economic diversification, development of alternative industries.	• Economic diversification measures (number of alternative industries developed, change in local employment rates).
Regulatory institutions	NIMOS, NMA, Minerals Institute (DIS)	Strengthening institutional capacity, effective enforcement, cooperation between institutions.	• Measures of institutional capacity (number of trained personnel, resources available) • Enforcement statistics (number of violations detected, fines levied).
Legal framework	Environmental Framework Act, EIA	Implementation and enforcement of legal	• Number of legal framework revisions and updates.

Environmental and Social Impacts	Preliminary Indicators	Preliminary Mitigation Measures	Preliminary Operational Control and Key Performance Indicators (KPIs)[11]
	Activities, EIA Procedure, Environmental Permit, Hazardous Substances, Environmental Fund, Rules and Procedures for Environmental Controllers	framework, regular review and updates. Revise institutional organization and create new GOS agencies where and when necessary.	• Compliance rates with environmental laws and regulations.
Displacement and resettlement	Displacement of local communities	Compensation commensurate with WB ESS 5 under WB ESF 2018 land Acquisition, restrictions on land Use and involuntary resettlement. Ensure the implementation of a grievance mechanism.	• Number of people successfully resettled and compensated. • Rate of livelihood restoration among resettled individuals. • Number of complaints received by MNR
Soil degradation and erosion	Soil contamination	Proper waste disposal, use of less harmful chemicals, soil remediation.	• Effectiveness of soil remediation efforts. • Change in soil quality measures.
Social issues	Child labor, forced labor, human trafficking, poor working conditions, gender-based violence	Labor rights enforcement, social support programs, awareness campaigns; review or creation of labor and civil rights protection authorities or regulatory agency.	• Number of occupational health and safety incidents. • Incidence rate of labor violations. • Measurement of social support programs (number of beneficiaries, impact on poverty levels). • Number of awareness campaigns • Mining company labor law • Mining company employee code of conduct
Indigenous and tribal communities	Land rights	Compensation measures with the implementation of the WB ESS5.and ESS7 under WB ESF 2028. Specifically engage Indigenous and tribal communities Freedom of choice, allowing the right to indicate what, and who can work on their land	• Extent of benefits shared with affected communities. • Fair and transparent law on the protection of communities and living environment for concession allocations. • Measure of land rights disputes involving

Environmental and Social Impacts	Preliminary Indicators	Preliminary Mitigation Measures	Preliminary Operational Control and Key Performance Indicators (KPIs)[11]
			Indigenous and tribal communities. • Land rights documents
Health risks	Exposure to hazardous chemicals	Personal protective equipment, safety training, proper waste management Explore alternatives to the use of hazardous chemicals Include safety systems established for the handling and management, storage etc. based on chemical specific MSDS Training of staff to qualify them on the handling of hazardous chemicals	• Number of health incidents related to hazardous chemical exposure. • Efficacy of safety training programs (decrease in incidents, improvement in knowledge). • Research programs on the replacement of hazardous chemicals • Listing of safety systems • Training programs
Informal economy	Tax evasion and other illegal activities	Formalization of the sector, legal and regulatory frameworks, enforcement.	• Measure of sector formalization) number of informal operations now registered).
Mercury contamination	Mercury contamination	Reduction of mercury use and emissions, safe handling and disposal.	• Change in mercury use and emissions levels. • Measure of safe handling and disposal procedures.
Worker health and safety risks	Worker health and safety risks, Labor influx, Gender equity, Gender-based violence	Promotion of safe and fair working conditions, training, and protective measures.	• Incidence rate of occupational health and safety violations. • Measurement of gender equity (male to female worker ratio, wage equality).

Source: RINA, 2022

4 KEY SESA FINDINGS

The SESA process allowed the identification of a number of key findings considered essential in defining a general normative and regulatory framework that can efficiently govern the development of the mining sector in Suriname. Using the information collected during the SESA process, and with an understanding of the current situation regarding the critical environmental and social impacts and risks presented in chapter two and the mitigations and monitoring measures presented in chapter three, it was possible to identify key findings that require special attention and for which strategic recommendations have been formulated.

The key findings described in this chapter are derived from data review and a gap analysis carried out by the SESA team, building on the Scoping report which includes the Inception report found in Appendix B, the Regulatory and Institutional Framework and Assessment of the Government of Suriname Capacity in Appendix D, and on the Environmental and Social Impacts of Mining with Mitigation and Monitoring Measures in Appendix E. The Strategic Policy Recommendations of the SESA and its Implementation Plan were built on the SESA framework and the strategic assessment of identified risks, considering the analysis of the scenarios and critical decision factors.

4.1 STRENGTHEN INSTITUTIONAL CAPACITY TOWARDS BETTER EFFICIENCY

4.1.1 Regulatory institutions and their legal frameworks

The implementation of the SESA and the sustainable development of the mining sector highly depends on the capacity of the responsible institutions. A review of the current situation through discussions and meetings with various government authorities allowed to identify as a key finding that there is lack of clearly defined roles and responsibilities for the monitoring of social and environmental impacts in the mining sector. The two main institutions identified for the SESA implementation are the MNR and the NIMOS, which are in the process of being converted to the National Environment Authority (NMA). ROM and the Ministry of Finance also play a key role in the SESA.

To verify the information, Institutional capacity assessment was conducted for MNR and NIMOS. The following weaknesses and suggested remediation actions were identified.

4.1.2 Institutional capacity assessment (ICAS) of the MNR – MNR

The assessment and results of the evaluation constitute the main inputs to determine the capacity of the institution to comply with fiduciary, administrative, internal control and external audit responsibilities required by the World Bank from the executing agencies. In addition, the assessment provides indicators on the levels of development and risks implicit in the institution and their direct implications on the execution of a World Bank project."

The analysis contained in each of the seven components of the Institutional Capacity Assessment System (ICAS) tool shows, in most cases, the presence of medium levels of development (4 Medium Development) and associated medium risk levels (4), one satisfactory development and associated low risk, and two cases of non-Existing with high level of risks.

With only one Satisfactory Development, it is possible to conclude that the MNR shows several sectors that need strengthening to ensure proper implementation of the regulatory framework..

The complete report including the questionnaire for the institutional capacity assessment can be found in Appendix D.

4.1.3 Institutional capacity assessment of National Institute for Environment and Development in Suriname - NIMOS

The assessment and results of the evaluation constitute the main inputs to determine the capacity of the institution to comply with fiduciary, administrative, internal control and external audit responsibilities required by the World Bank from the executing agencies. In addition, the assessment provides indicators

on the levels of development and risks implicit in the institution and their direct implications on the execution of a World Bank project."

This assessment should therefore not be seen against the background of the implementation of an existing World Bank project or program, but rather an overall assessment of the institutional capacity to carry out current and future responsibilities in accordance with World Bank standards.

The analysis contained in each of the seven components of ICAS shows in most cases the presence of low levels of development (4 Non-Development) and associated high risk levels (4), one incipient development and, only one case of medium level of development and associated medium risk levels as well as one case with satisfactory development and associated low risk.

During the assessment, it appeared that NIMOS has started to structure the organization in its transformation phase towards the NMA. However, this appears to be only the initial phase because the policy documents that are being prepared are still in draft form.

The general conclusion that can be drawn is that the current NIMOS has a weak institutional capacity and needs urgent reinforcement to carry out its legal duties and responsibilities as NMA.

The complete report including the questionnaire for the institutional capacity assessment can be found in Appendix D.

4.1.4 Monitoring and evaluation of capacity of government agency personnel

One of the main obstacles identified for appropriate monitoring and evaluation of projects is that there are insufficient resources. If not well prepared, a lack of capacity could have a negative impact on the implementation of the SESA and of the reformed regulatory framework. GOS has to work with Key Performance Indicators (KPI) building on baselines that will allow motoring and evaluation of mitigation actions for risk and impact reduction of mining activities and verify their efficiency.

4.1.5 Key findings on institutional capacity

The SESA study showed that there is a lack of clearly defined roles and responsibilities for the monitoring of social and environmental impacts in the mining sector. Following the institutional assessment of MNR and NIMOS, the results of the institutional capacity assessment of MNR showed several sectors that need strengthening to ensure proper implementation of the regulatory framework, and the current NIMOS has a weak institutional capacity and needs urgent reinforcement to carry out its legal duties and responsibilities as NMA. Overall, the GOS currently has insufficient resources to ensure the monitoring and evaluation of mining projects.

4.2 DEVELOP THE LEGAL AND REGULATORY FRAMEWORK TO CREATE A CONDUCIVE ENVIRONMENT WHILE PROVIDING GUARANTEES TO ATTRACT INVESTMENT

In order develop a proper legal and regulatory framework, it is necessary to well understand the mining development context, the current legal and regulatory framework in the mining sector, the newly developed grievance mechanism, mining licensing and permitting procedures. The following sections explain the current situation and responsibilities, and the gaps in the legal system that need to be closed for a more conducive environment that will provide guarantees that will attract investments in the mining sector.

4.2.1 MNR as the SESA implementation agency

Mining falls under the Ministry of Natural Resources (MNR). The aim of the MNR is to ensure an integral sustainable and efficient management and development of the production of the natural resources present in Suriname, taking into account the environment, safety and rights of local communities. The Ministry consists of four (4) directorates, as further detailed in the organizational structure, namely:

1) Directorate General Administration NH
2) Directorate of Water
3) Directorate of Energy
4) Mining Directorate

The organization has been expanded to include directorate and departmental tasks. The determining organizational objectives for this are:

- Planning, monitoring and control of the spending of the budget and other resources.
- The optimization of the operational execution of tasks.
- Application of integrated management in the various policy areas.
- Application of advancing technology within the various policy areas.
- Continuous quality improvement and quality maintenance of the execution capacity.
- Entering into regional and international partnerships.
- Sustainable professional and personal development of staff.

The MNR is supported by[12]:

- The Geological and Mining Department (GMD), responsible for managing concessions, generating and distributing geological information, and conducting surveys.
- The Unit for Coordination of the Small-scale Gold Mining Sector (UOKGS), established to register small-scale miners, mining operations locations, and relevant mining equipment, with the aim of restoring governmental authority over the sector, improving its environmental performance, and recovering tax income.
- The Gold Sector Regulation Commission (OGS), created in 2011 as a presidential commission reporting to the MNR, had primary responsibility for preparing an inventory of the gold sector with the aim of developing a more integrated policy in that sector. The Commission was a multidisciplinary entity that included the Police, the Army, the Tax Agency, the Central Intelligence and Security Services, the Ministry of Labor, Employment and Youth Affairs, the Geological Mining Department, and the Public Health Agency. Its primary goals included seeking to register previously unregistered miners and expelling small-scale operations from areas of conflict. In practice, the Commission was not effective since funding and resources were not nearly sufficient to regulate an industry primarily composed of small-scale immigrant miners and local miners from neighboring communities. In September 2020, the OGS was reinstalled as a commission under the administration of the Vice-President of Suriname and is now the Commission for the Coordination of the Small-scale Gold Mining Sector (OKGS). The technical working unit of the OKGS (UOKGS) remained under the MNR. In that month, various actions were taken by the current administration, such as issuing state decrees on the registration of small scale-miners and equipment[13] and adjustment of royalties[14].
- The Geological Mining Service (GMD) is the primary administrative body with responsibility for providing guidance and issuing applications for miners' licenses. GMD is also

[12] Organization of American States. Secretariat for Multidimensional Security. Department against Transnational Organized Crime (March 2023).On the trail of illicit gold proceeds: strengthening the fight against illegal mining finances : Suriname's case.

[13] Staatsbesluit van 28 oktober 2021 ter uitvoering van artikel 3 van het decreet mijnbouw ((S.B. 1986 no. 82, zoals gewijzigd bij S.B. 1997 no. 44 (Besluit inventarisatie kleinschalige goudsector)), (S.B. 2021 no. 151).

[14] Staatsbesluit van 31 december 2021, houdende nadere wijzing van het Besluit Royalty Klein mijnbouw ter zake van Goud en Exploitatie Bouwmaterialen (S.B. 1989 no. 40, zoals gewijzigd bij S.B. 2021 no.12), (S.B. 2021 no. 177).

responsible for managing concessions, generating and distributing geological information, and conducting surveys.

In July 2020, a Community and Engagement Unit was established within the MNR to provide guidance for community engagement in natural resource development. In view of the developments in the mining sector, the environment and the rights of local communities should be taken into account in decision-making processes for the issuance of concessions, keeping with the principle of Free Prior Informed Consent (FPIC). The State recognizes its duties to society in its pursuance of a transparent policy. Mining rights are currently issued with the consent of the local communities, whereby those with rights to mine gold, other minerals, and building materials, are being encouraged to make a clear contribution to the development of the surrounding area. Mediation is employed as much as possible to resolve many lingering conflicts between communities and mining rights holders[15].

Small-scale mining is a sector for which public policy formulation is increasingly needed, especially for natural resource protection. Examples of aspects where it is needed include controlling activities in the far interior and along Suriname's porous national borders, financial resource mobilization, and legislation enforcement capacity. In 2021, a State Decree[16] was issued for the development of an inventory and registration of those active in small-scale mining and their mining equipment. This database will be used during a three-year transition period for the formalization of actors working illegally in the sector, while gradually instituting the criminalization of illegal mining by both Surinamese and migrant miners. After the transition period, illegal mining will become a criminal offense. During this coordination, joint efforts will be made with the tax authorities, the Ministry of Justice and Police, the Ministry of Spatial Planning and Environment, and the Ministry of Labor, Employment and Youth Affairs, and, where necessary, other ministries and institutions, to achieve an integrated approach to problems in the areas of taxation, safety and security, environmental degradation, lawful citizenship, and labor[17].

Other institutions supporting MNR

Other key institutions for Suriname's extractives sector include Staatsolie, the state oil and gas company; and the Bauxite Institute Suriname (BIS), which governs the country's bauxite sector.

Grassalco (short for Grasshopper Aluminum Company) is Suriname's state-owned mining company, which falls under the aegis of the Ministry of Natural Resources. Contributing to Suriname's sustainable development is a core part of the company's mission and vision. The original aim of the company upon its establishment in 1971 was to enter into joint ventures with foreign companies to exploit bauxite reserves in the west of the country; Grassalco has since expanded to cover exploration and exploitation of other minerals and ores, including gold. The company is one of the parties to the mineral agreement governing Rosebel, as it held the original rights to the concession, and it receives a significant portion of its operating budget from royalties derived from the project. The company owns several other mineral concessions (Lely Hills for gold, for example) that will impact its involvement in future exploration and exploitation projects. In 2014, Grassalco began processing tailings at the Maripaston site (formerly an informal small-scale mine site) in an attempt to show operators that gold can be extracted without using mercury[18].

[15] Organization of American States. Secretariat for Multidimensional Security. Department against Transnational Organized Crime (March 2023). On the trail of illicit gold proceeds: strengthening the fight against illegal mining finances : Suriname's case.

[16] *Staatsbesluit van 28 oktober 2021 ter uitvoering van artikel 3 van het decreet mijnbouw ((S.B. 1986 no. 82, zoals gewijzigd bij S.B. 1997 no. 44 (Besluit inventarisatie kleinschalige goudsector)), (S.B. 2021 no. 151).* (State Decree of October 28, 2021, for the implementation of Article 3 of the Mining Decree ((S.B. 1986 no. 82, as amended by S.B. 1997 no. 44 (Inventory Small-scale Gold Sector Decree)), (S.B. 2021 no. 151))

[17] Organization of American States. Secretariat for Multidimensional Security. Department against Transnational Organized Crime (March 2023). On the trail of illicit gold proceeds: strengthening the fight against illegal mining finances : Suriname's case.

[18] Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2017). IGF Mining Policy Framework Assessment: Suriname. Winnipeg: IISD.

4.2.2 Mining Development Context of Suriname

4.2.2.1 Major mining sectors

Three major mining sectors that can be developed individually or in parallel with each other were identified in support of the country's economic development and are summarized below.

1. Large-Scale Gold Mining

Large-scale gold mining is currently undertaken by two mining companies, namely, IAMGOLD (Rosebel mine) and Newmont (Merian mine). Gold discoveries in the Greenstone belts are typically low tonnage, with small reserves, with an estimated 0.76923076923 grams per ton (Kioe-A-Sen, 2016), although they can have a long mining life, a result of the geology of these deposits and complex exploration required to define ore reserves. While they are typically mines with good grades, these characteristics make them difficult financing propositions for their owners, and they are typically owned by mid-tier and small-tier mining companies with numerous ASM and often illegal miners involved in the mining activities. The potential for further discoveries of this type of mines typically requires diligent exploration over a number of years by dedicated exploration teams.

Figure 4.1 shows the Geology and Mineral Deposits in Suriname, confirming the potential of the mining sector in the country.

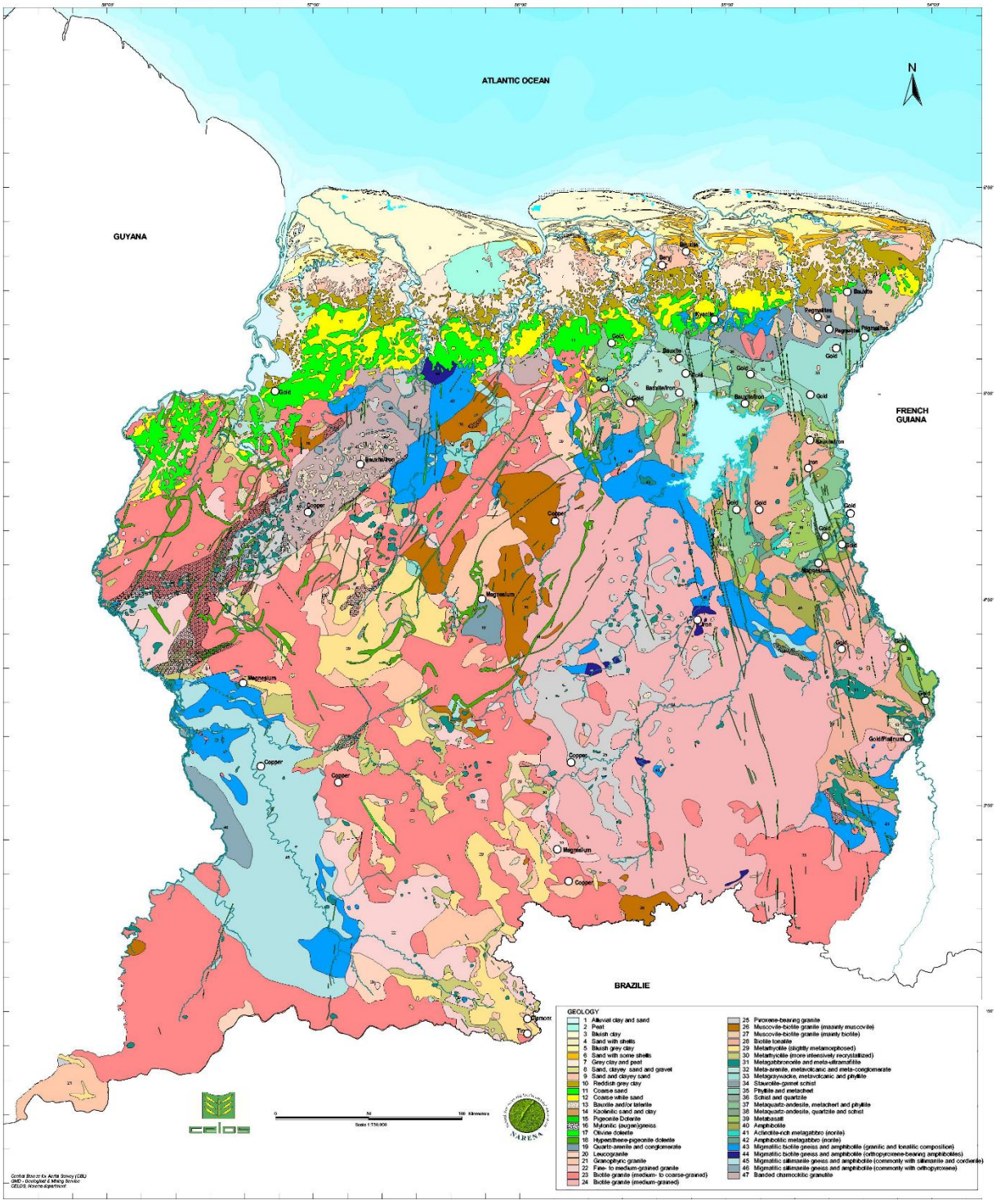


Figure 4.1: Map of Suriname's Geology and Mineral Deposits.

Source:

Compliance of dedicated exploration teams with environmental, social and closure, as well as being regulated by the national legal code, are generally also guided by international reporting guidelines and requirements, frequently driven by financing or stock exchange disclosure requirements.

These two large-scale mining companies (IAMGold and Newmont) have both been involved with litigation over land rights with local inhabitants, which highlights a significant challenge for the government over land use and rights. Another challenge is the implementation of adequate environmental legislation, including legislation covering the closure of these facilities at the end of their commercial lives, which is seen as a legacy of the bauxite mining industry, for example.

These companies have already replaced mercury with cyanide. The sharing of knowledge and skills in the management of deforestation, sediments and soils, and better management of water quality may eventually trickle down to small-scale gold mining. Meanwhile, the use of cyanide remains a safety concern for local populations.

This sector is less guided by external (global) development issues than by the implementation of adequate legislation and its enforcement, and possibly reforms that look to encourage exploration and retain the geological knowledge base in-country when a company withdraws from its prospecting areas. This sector therefore needs to look at its interface with political, economic, social, technological, environmental, and legal factors internal to Suriname.

2. Small-Scale and Artisanal Gold Mining

In recent years, in the Southern hemisphere, countries have implemented several support programs for miners working in ASM, and whose characteristics are quite different depending on the place where they carry out their activities. These characteristics range from the miners' own level of education; the migration processes they undergo in search of gold ore; the mining site of the areas where they carry out their activities; the price of gold and other aspects that make the formalization process in ASM a great challenge for the states.

Considering ASM experience in the Global South and utilizing experience such as in the case of Peru where the formalization process has been ongoing for more than 20 years, public policy solutions focused on the design of better regulatory frameworks for ASM are limited by numerous factors. One of these factors is the right of ownership of the workplace which is necessary to maintain a legal guideline that guarantees the completion of the process, otherwise this process is not encouraging for the miners.

This sector entails a detailed evaluation of the small-scale and artisanal mining sector from the perspective of the small-scale miners. Without the incorporation of opinions, beliefs, and life realities of local miners, policy interventions aimed at changing the behavior of these miners are doomed to fail." From this perspective a full business-type analysis should be undertaken to determine the required strategy for the mining sector, with the intention, not of achieving perfection, but rather achieving meaningful progress in the particularly important social and environmental challenges around this industry sector. It should be noted that formalization and legality are two quite different concepts that need to be considered within the mining legal framework of Suriname. The formalization of ASM would bring ASGM workers into the formal sector through legal, regulatory and policy frameworks. A legislative framework specific to ASM needs to be developed. GOS should adopt a simple and decentralized registration process considering the failure of formalization programs is largely due to inoperative and inefficient bureaucracy. Moreover, a comprehensive education program should be deployed that will train miners in sustainable and more efficient extractive practices. Currently, UNDP jointly with NIMOS is conducting the project Improving Environmental Management in the Mining Sector of Suriname, with Emphasis on Artisanal and Small-Scale Gold Mining (EMSAGS) which aims at improving environmental management in the mining sector of Suriname, with the emphasis on artisanal and small-scale gold mining as the biggest cause of deforestation in Suriname.

3. Bauxite Mining

The restart of the bauxite industry that closed in 2015 is a challenging one. This sector has significant upsides if it is done in conjunction with the opportunities presented in the Oil and Gas sector in Suriname or by the significant gas finds in neighboring Guyana to produce low-cost electricity for the bauxite-alumina-aluminum processing and smelting. The closure of the bauxite industry after more than 100 years of mining and processing should have left a significant technological legacy in Suriname that could be reengaged and, since the international aluminum players have left the country, new contracts can be negotiated with them, if required.

There are significant challenges for the restart of this sector. Startup costs will be high, with new infrastructure such as a gas-fired power station, refurbishing of railroad infrastructure and the Paranam plant. Moreover, the government is targeting new bauxite deposits mainly located in the western part of the country, This will generate additional environmental concerns based on the bauxite deposits being generally located in heavily forested areas, thus the need for clear environmental and social legislation. The definition of bauxite reserves and consequent mine feasibility studies and their construction will be high cost and will require many years before production can resume.

✓ Reasons for closure in 2015

- Exhaustion of coastal bauxite reserves;
- High cost of electricity required to produce alumina, and smelting to produce aluminum;
- High cost of shipping bulky bauxite;
- Decline in world aluminum prices;

✓ Challenges to restarting bauxite industry

- Exploration would have to be restarted and reserves would have to be defined and restated;
- Bauxite deposits are inland from the coastal plain with significant potential for environmental impacts (forest, biodiversity, water quality). Figure 4.2 shows the potential area affected by bauxite mining;
- Bauxite deposits are of lower grade;
- Infrastructure dedicated to the bauxite industry through 2015 will have to be re-evaluated and recommissioned (railways, Paranam plant); or new mining sites will need to be identified and the required infrastructure be built accordingly;
- Cost to restart the industry;

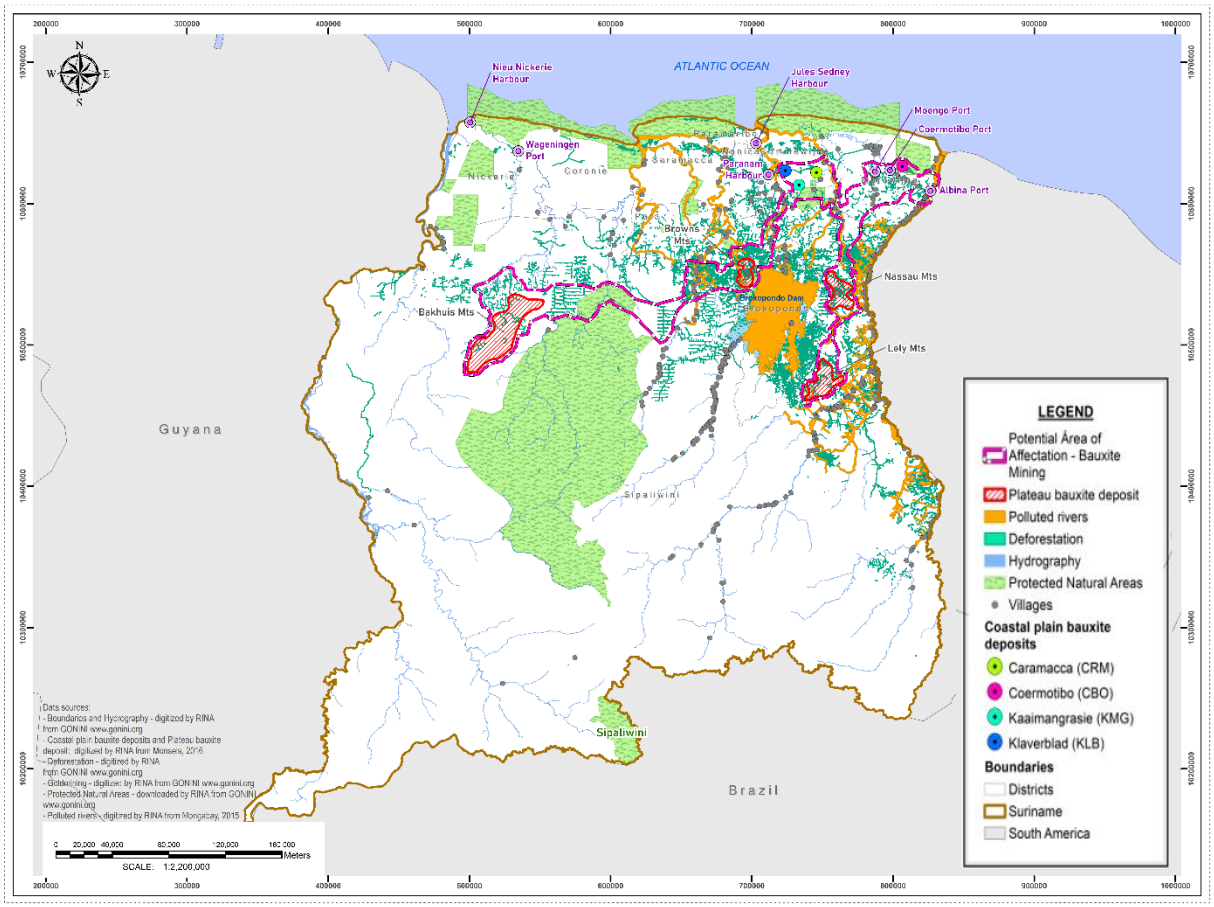


Figure 4.2 Potential areas affected by Bauxite Mining

✓ Opportunities in restarting bauxite industry

- Suriname has significant bauxite reserves;
- Potential for cheaper electricity from gas because of potentially large offshore gas finds, based on finds in neighboring Guyana, hence lower refining and smelting costs;
- The government of Suriname has a stated intention to restart the bauxite industry;
- Suriname has over 100 years of experience in bauxite mining with the potential to restart without major aluminum mining companies;
- New contracts can be negotiated with mining companies;
- Suriname has deep coastal waters, which is favorable for bulk shipping.

As mentioned previously, the development of each of the sectors will depend on a number of factors, whether the Base Case Scenario or the Accelerated Case Scenario is adopted. Their impact is highly dependent on the application of clear legislation and monitoring programs. It is important to note that unfortunately, mining concessions are sometimes allowed in protected areas, which affects the fauna and flora. Figure 4.3 presents a map showing some of the disruptions of mining on biodiversity and protected areas.

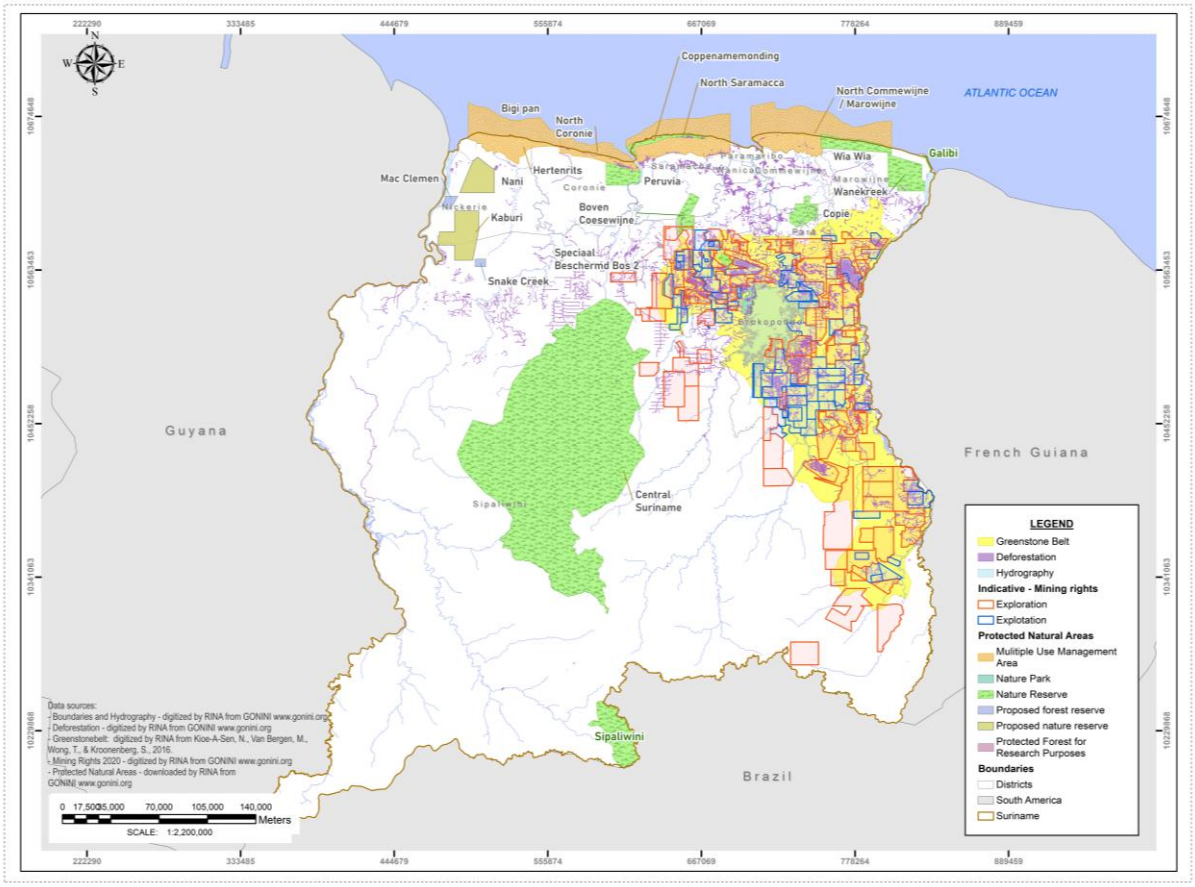


Figure 4.3: Disruption on biodiversity and protected areas

4.2.3 Concluding summary regarding the mining development context

Based on the information collected during the SESA process, it is possible to conclude the following:

- ✓ The development of the mining sector offers a sustainable option for the country's development while benefits can be used for local infrastructure and for local communities contributing to a better quality of life.
- ✓ Suriname holds high potential reserves in gold and bauxite. If properly developed and adequately managed, these can provide significant revenues for the country and generate employment opportunities for its population.
- ✓ Independently of the development scenario adopted for the mining sector, MNR has the responsibility to implement an appropriate overarching policy that will promote and govern the development of the mining sector of Suriname.
- ✓ The implementation of the new Mining Act under construction that offers clear limits and control for all stages of the mining process, and monitoring of the potential environmental impacts, is of prime importance to the successful development of the mining sector while preserving the natural, social and cultural resource.
- ✓ In the absence of the implementation of the new Mining Act and its reforms, the rapid development of the mining sector in Suriname will likely take place without consideration of biodiversity conservation or sustainable management of critical natural ecosystems.

- ✓ Government capabilities and capacities is crucial to implement an efficient and realistic regulatory framework for the mining sector of Suriname as to:
  - Ensure minimal undesired environmental and social effects;
  - Implement appropriate mitigation measures where needed,
  - Undertake necessary corrective actions, as required;
  - Allow transparent financial management from mining revenues;
  - Increase communication and access to information;
  - Improve stakeholder participation (including Indigenous and tribal peoples and other vulnerable groups).
- ✓ Environmental and social effects of mining will most likely overshadow existing environmental and social challenges such as:
  - Mercury phase out;
  - ASM formalization;
  - Relocation of traditional fishing and hunting areas;
  - Climate change;
  - Disruption of biodiversity and protected areas (as shown in figure4.3);
  - Land rights.
- ✓ In case the mining activity is not properly regulated, it could place significant stress on the current infrastructure and natural resources which would increase costs for remediation in the long-term;
- ✓ The environmental and social impacts of mining can easily be underestimated if proper and appropriate planning is not ensured from the beginning of the reform;
- ✓ The SESA alone cannot effectively determine how and to what degree environmental and social impacts will result from the development of the mining sector;
- ✓ The SESA outlines the critical decision factors that will enable the GOS to make strategic decisions;
- ✓ The success of the SESA will depend on its effective implementation and the political will of the GOS to act on its recommendations.

4.2.4 Current legal and regulatory framework in the mining sector

The legal and regulatory framework of Suriname is composed of the national Constitution, Laws or Acts of Parliament (also called Wet or Landsverordening prior to 1975), Decrees (Decreet)[19], Government State Orders (Staatsbesluiten). In addition, there are regulations namely, Presidential Resolutions, Presidential Orders, Ministerial Orders (beschikkingen) and District Ordinances (verordeninginen). The regulatory framework is also supported by international agreements, treaties, conventions, etc.

Table 4.1 lists the treaties ratified by Suriname. The adoption and enforcement of existing best practices and operational standard guidelines for the mining sector would be an important step towards the definition of a working set of national standards.

[19] Decrees date from the period of 1980 – 1986 and have the same status as past or present Laws.

Table 4.1 International treaties ratified by Suriname.

International Treaties
• Amazon Cooperation Treaty
• American Convention on Human Rights
• Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
• C014 - Weekly Rest (Industry) Convention, 1921 (No. 14)
• C017 - Workmen's Compensation (Accidents) Convention, 1925 (No. 17)
• C019 - Equality of Treatment (Accident Compensation) Convention, 1925 (No. 19)
• C029 - Forced Labour Convention, 1930 (No. 29)
• C042 - Workmen's Compensation (Occupational Diseases) Convention (Revised), 1934 (No. 42)
• C081 - Labour Inspection Convention, 1947 (No. 81)
• C087 - Freedom of Association and Protection of the Right to Organize Convention, 1948 (No. 87)
• C095 - Protection of Wages Convention, 1949 (No. 95)
• C098 - Right to Organize and Collective Bargaining Convention, 1949 (No. 98)
• C100 - Equal Remuneration Convention, 1951 (No. 100)
• C105 - Abolition of Forced Labour Convention, 1957 (No. 105)
• C111 - Discrimination (Employment and Occupation) Convention, 1958 (No. 111)
• C118 - Equality of Treatment (Social Security) Convention, 1962 (No. 118)
• C122 - Employment Policy Convention, 1964 (No. 122)
• C135 - Workers' Representatives Convention, 1971 (No. 135)
• C138 - Minimum Age Convention, 1973 (No. 138)
• C144 - Tripartite Consultation (International Labour Standards) Convention, 1976 (No. 144)
• C154 - Collective Bargaining Convention, 1981 (No. 154)
• C182 - Worst Forms of Child Labour Convention, 1999 (No. 182)
• Constitution of the International Labor Organization
• Constitution of the Pan American Health Organization
• Convention Concerning the Protection of the World Cultural and Natural Heritage
• Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere
• Convention on the Elimination of All Forms of Discrimination against Women
• Convention on the International Trade of Endangered Species of Wild Fauna and Flora
• Convention on the Rights of Persons with Disabilities
• Convention on the Rights of the Child
• RAMSAR Convention on Wetlands of International Importance especially as Waterfowl Habitat
• International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 relating thereto (MARPOL)
• International Convention for the Regulation of Whaling
• International Convention on the Elimination of All Forms of Racial Discrimination
• International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties
• International Covenant on Economic, Social and Cultural Rights
• International Plant Protection Convention
• International Tropical Timber Agreement
• Kyoto Protocol (Framework Convention on Climate Change)

International Treaties
• Minamata Convention on Mercury
• Montreal Protocol on Substances that Deplete the Ozone Layer
• P029 - Protocol of 2014 to the Forced Labour Convention, 1930
• Paris Agreement (Framework Convention on Climate Change
• RAMSAR Convention on Wetlands
• Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
• Stockholm Convention on Persistent Organic Pollutants
• The Cartagena Protocol on Biosafety to the Convention on Biological Diversity
• The London Convention on Prevention of Pollution by Dumping of Wastes and Other Matter
• UN Declaration on Rights of Indigenous People
• United Nations Convention on Biological Diversity
• United Nations Convention on the Law of the Sea; UNCLOS
• United Nations Convention to Combat Desertification
• United Nations Framework Convention on Climate Change
• Vienna Convention for the Protection of the Ozone Layer

Source. RINA, 2023

Suriname's mining sector is currently governed by the Mining Decree (1986) and regulated by the Ministry of Natural Resources, the Ministry of Finance, the Ministry of Regional Development and the Ministry of Trade, Industry and Tourism. The legal and fiscal framework for the oil, gas and mining sectors is also supported by other legislation, including the Corporate Income Tax Act and Dividend Tax Act (EITI, 2022). Applications for mining rights are processed by the Geological Mining Service (GMD) and are reviewed and approved by the MNR in accordance with the Mining Decree. Suriname does not have a public mining license register, however some information about issued licenses is included in EITI Reports (EITI, 2022). EITI Suriname is administered by the Suriname Multi-Stakeholder Group (MSG), which is hosted by the MNR. The MSG is chaired by the Minister of Natural Resources (EITI, 2022).

On the other hand, the environmental approval process is to be administered under the new Environmental Framework Act 2022, through the yet to be operational National Environment Authority (in Dutch: Nationale Milieu Autoriteit, NMA), an institution transitioned from the National Institute for Environment and Development in Suriname (in Dutch: National Instituut voor Milieu en Ontwikkeling in Suriname, NIMOS), thus forming the new National Environment Structure in Suriname. Through this structure, the provisions included in the Environmental Framework Act will be implemented and applied in an efficient and effective manner (NIMOS, 2022b).

4.2.4.1 Gaps in the legal and institutional framework of the mining sector in Suriname

The following presents some of the most important gaps identified in the legal and institutional framework of the mining sector in Suriname. These have been addressed in the various sections of the action plan, with specific activities suggested to reduce or eliminate these gaps.

- The mining legislation is out of date and does not reflect the current situation and best practices in the sector. The current mining Decree acknowledges the life cycle of a mining concession but does not clarify environmental and social impact assessments, links to national development goals, or ties to local development. It lacks requirements for the revision of mine closure and rehabilitation plans with a changing context, requirements for extensive and ongoing community consultation, responses to commodity price volatility. It also lacks financial reassurance funds for mine closure, environmental liability, and progressive post-closure rehabilitation. It does not

adhere to international best practice on environmental management, including water, waste and biodiversity, emergency preparedness planning, protection of women and children, involuntary resettlement, and on artisanal mining.

- The Mining decree in force that governs the mining sector has not been supplemented by regulations for its implementation, including but not limited to emission and discharge standards.
- Institutional capacity to monitor the sector and enforce laws and regulations is insufficient owing to Suriname's social, economic, and geographical characteristics .
- The mining cadaster is poorly managed and geological data management is weak.
- Maps and GIS information are currently unofficial and/or outdated. GONINI is currently responsible for the GIS information but is not updating or allowing open access to the information. Proper and updated geological and territorial maps and GIS information are needed to facilitate the understanding of mining locations, mining concessions, geological data and information, conservation of sensitive and protected areas, and cultural resources and respect for Indigenous land.
- The environmental and social assessment requirements lack proper legal provisions for Indigenous and tribal communities and stakeholder engagement, and for the control and monitoring mechanisms of environmental and social impacts.
- Permit applications and licensing are not homogenized and contain discretionary clauses leading to a lack of transparency, weakening investor confidence. Currently, there are individual agreements for each company,
- Although the Mining Decree promotes the employment of community people, local procurement, permit applications do not require the identification or quantification of opportunities, nor does it include proposals of programs that lead to the creation of employment and sustainable benefits for the community or country over the life of the mining project.
- A limited amount of socioeconomic planning is required in the permitting process. Most mineral deposits in Suriname are quite remote, and found away from large population clusters, which limits opportunities for local development spending. While baseline information on socioeconomic conditions is required as part of the EIA process, it is unclear whether regular reporting on related impacts is an obligation for permit holders.
- Revenues generated from the mining sector are largely integrated into the national budget, and there is no open or transparent data on how benefits from the sector are being distributed at the local, regional and national levels. This is particularly problematic for small-scale mining permit holders, who pay royalties on their production at registered gold houses but reportedly receive limited proof of their payments; the impression among these permit holders is that the funds rarely reach the national treasury. As a result, local populations do not always see an obvious link between the mining sector and visible development benefits accruing to them in their communities.
- The regulatory framework does not include the distribution of benefits to mining or mining affected communities that often lack health and educational programs and basic infrastructure. Benefits should be used also to ensure drinking water and uncontaminated fish, necessities that are becoming a major concern with the contamination of water from mercury and cyanide used in mining.
- There is no legal basis for public consultation nor to require FPIC procedures in Indigenous and tribal communities.
- The lack of national legislation on Indigenous and tribal rights, particularly with regards to land and resources, and in the recognition of Indigenous authorities, allows for tensions to easily emerge in confrontations between among Indigenous communities and mine operators.

Indigenous and tribal peoples of Suriname do not have official land ownership of their community land, and this is one of the causes for conflicts. The state needs to take into consideration the judgments of the International Court of Human Rights with rulings in favor of the rights of communities, specifically regarding the lack of respect of land tenure.

- The state has little capacity and limited resources to address the negative environmental and social impacts of mining in general and ASGM in particular. Moreover, there is minimal information exchange between government institutions, mining companies and ASGM, which sometimes leads to conflicts or misunderstandings.
- There is an uncontrolled use of mercury and lack of awareness for its use in AGSM.
- There is a lack of enforcement of Occupational Health and Safety legislation particularly in the ASGM sector, and a lack of awareness on safe mining.
- There is an absence of control by the State or local authorities regarding illegal miners, especially *garimpeiros* who enter Suriname in large numbers from Brazil to work as illegal miners, reducing the opportunities of employment for local populations. The number of *garimpeiros* present in some communities is said to generate insecurity and even violence, as reported by Indigenous authorities.

4.2.5 Extractive Industries Transparency Initiative (EITI) Standard

The Extractive Industries Transparency Initiative (EITI) is the global standard to promote the open and accountable management of oil, gas and mineral resources. The EITI Standard requires the disclosure of information along the extractive industry value chain from the point of extraction, to how revenues make their way through the government, and how they benefit the public.

Alongside the taxes imposed by central, regional, and local governments, extractive companies frequently make social and environmental contributions within the regions where they conduct operations. These contributions can be directed towards central, regional, or local governments, communities, non-governmental organizations, or other relevant third parties. However, communities often lack knowledge regarding the specific contractual obligations of these companies, including mandatory and voluntary expenditures related to social and environmental initiatives. This lack of transparency and limited access to contractual terms pose challenges to public oversight. To address these concerns, it is crucial to promote transparency by openly sharing information about the expected contributions and the actual amounts allocated, thereby providing a more comprehensive understanding for all stakeholders involved.

4.2.5.1 EITI Requirement 6.1 Social and environmental expenditures Guidance Note (2021)

Requirement 6.1 of the EITI Standard objective is to enable public understanding of the extractive companies' social and environmental contributions and provide a basis for assessing extractive companies' compliance with their legal and contractual obligations to undertake social and environmental expenditures. The note provides step-by-step guidance to multi-stakeholder groups on how to report on social and environmental expenditures, offers examples from implementing countries and outlines opportunities to strengthen the dissemination and use of data.

4.2.5.2 Extractive Industries Transparency Initiative in Suriname (EITI-SR)

The Extractive Industries Transparency Initiative in Suriname (EITI-SR) strives to publish timely and accurate information on key aspects of Suriname's natural resource management, including how licenses are allocated, how much tax, royalties and social contributions companies are paying, and where this money ends up in the government.

On 29 April 2016, the Minister of Natural Resources declared Suriname's intention of becoming an EITI implementing country, which eventually materialized in May 2017. Following the conclusion of Suriname's Validation in 2021, the EITI Board agreed that Suriname made meaningful progress overall in implementing the 2019 EITI Standard. The EITI Board agreed that Suriname would have until 1 April 2023 before its next validation (scheduled for October 2023), during which time, it could carry out

corrective actions related to government engagement (Requirement 1.1), industry engagement (Requirement 1.2), MSG oversight (Requirement 1.4), work plan (Requirement 1.5), contract and license allocations (Requirement 2.2), register of licenses (Requirement 2.3), contracts (Requirement 2.4), beneficial ownership (Requirement 2.5), state participation (Requirement 2.6), comprehensive disclosure of taxes and revenues (Requirement 4.1), sale of the state's share of production or other revenues collected in kind (Requirement 4.2), transactions related to state-owned enterprises (Requirement 4.5), data quality and assurance (Requirement 4.9), social expenditures (Requirement 6.1), quasi-fiscal expenditures (Requirement 6.2), the contribution of the extractive sector to the economy (Requirement 6.3), public debate (Requirement 7.1), data accessibility (Requirement 7.3) and Mining licensing and permitting procedures and responsibilities

Assessing mandates, capacity, incentives, and transparency in licensing/permitting processes is crucial for driving efficiency, compliance, economic development, accountability, and continuous improvement in regulatory systems. Such assessments enable governments and regulatory bodies to identify areas that require improvement and take necessary measures to streamline operations, enhance compliance, and foster economic growth.

4.2.6 Indigenous / tribal communities and land rights

4.2.6.1 Land rights

Suriname is undergoing a process to potentially recognize Indigenous land rights, but there is currently no legal framework. The situation regarding land rights and Indigenous and tribal legal recognition in Suriname remains complex and often contentious. Currently, the state vests ownership of all land and natural resources. Individuals and communities can claim ownership if they can demonstrate titles issued by the state. Traditional land ownership by Indigenous communities is currently not acknowledged by the legal system, which implies a lack of legal protection ensured by documented land titles[20].

As Suriname does not legally recognize the collective land rights of Indigenous peoples, traditional land ownership is not reflected in the legal system. In 2019, draft laws were submitted to the Collective Rights Act and a constitutional amendment to recognize Indigenous land rights. However, these have yet to be implemented. There is a growing movement promoting the recognition of land rights of Indigenous and tribal communities in Suriname; this issue was the main concern expressed during the visits to the various Indigenous and tribal communities.

4.2.6.2 Rights of the country's Indigenous people

Recognizing the rights of Indigenous people is of utmost importance in fostering a just and inclusive society. Indigenous and tribal communities possess distinct cultures, knowledge systems, and deep connections to their lands. By acknowledging and respecting their rights to self-determination, cultural preservation, and land stewardship, societies can promote equality, protect cultural diversity, and ensure the well-being of Indigenous and tribal peoples. This recognition not only upholds fundamental human rights but also contributes to sustainable development and social harmony. Suriname has ratified human rights treaties and declarations, including the United Nations Declaration on the Rights of Indigenous Peoples, under which Suriname has substantial obligations to recognize and respect the rights of the Indigenous Peoples and Local Communities (IPLCs). Yet the ILO 69 Convention has yet to be ratified.

Indigenous and tribal communities have their own traditional leadership structures, often including paramount chiefs namely *Granman overseeing the tribes, and* village captains responsible for their community. Although official authorities within their tribes or communities, none of them have official power recognized by the legal system. Recognition of such authorities would facilitate traditional

[20] WBG. (2020). Indigenous World. Report 2020. The International Work Group for Indigenous Affairs (IWGIA)

governance structures within their communities Recognition of these authorities would also facilitate the incorporation of customary law into the decision-making process and help ensure the respect for Indigenous rights.

4.2.6.3 Legislative Framework

Indigenous and tribal peoples' rights to the lands they traditionally live on, use for their subsistence, and consider as their customary territory are not expressly recognized in the Surinamese legislation. Sectoral laws such as the Forest Management Act and the Nature Conservation Orders, only briefly refer to "the rights of Indigenous and tribal people" and there are no further provisions or specifications on what these rights specifically are, and how they can be enforced. Even in the current Mining Act, it is only stated that upon applying for the right to exploration, a list be made of the villages in and in the vicinity of the plot applied for. However, this provision does not establish how this required information is to be used.

The customary rights of the IPLCs are not absolute rights and will always be subordinate to the public interest. Hence, the customary rights are respected, provided that they do not interfere with the general interest. The national legal framework does not provide any mechanism to incorporate Indigenous and Maroon participation in decision-making on resource exploitation and concessions.

4.2.6.4 Resettlement

Suriname has implemented resettlement programs including some that displaced Indigenous and tribal communities from their traditional lands. This translates into the loss of traditional lands creating a disconnection to the communities' ancestral lands, which in turn impacts their cultural practice and livelihood. For many, the traditional way of life means hunting and fishing, the overall use of natural resources found within their territories. Moreover, resettlement implies social disruption, relocation leading to social disorganization and loss of community cohesion. Unfortunately, there is currently no clear process for resettlement, including a lack of clear mitigation actions, compensation measures and consultation. In cases where resettlement is necessary, there should be clear legal procedures and legislation, which could build on the World Bank's ESS5 and ESS7. Resettlement must be conducted with utmost caution, and in consultation with the affected communities or people, while costs associated with the resettlement should be the responsibility of the project owners.

Involuntary resettlement is not regulated in the Suriname. However, expropriation is regulated through the Expropriation Act 1904 which stipulates that expropriation can only take place under another Act which states that the expropriation is in the public interest. The Expropriation Act provides that expropriation can also take place on behalf of special persons of associations responsible for the implementation of the work for which expropriation is claimed. For example, in 1959, the Topibo plantation was expropriated, taken from the Pinas family on behalf of Suralco (S.B. 1959 no.40). However, Art.12 provides that expropriation on behalf of special persons is not pronounced before enough assurance of payment of compensation has been given to the President's satisfaction, including interest from the date of pronouncement until the date of payment or consignment of the compensation. However, an accompanying process of participation and consultation is lacking.

With the promulgation of the Environmental Framework Act in 2020, an important legal step has been taken to involve the local communities through the Free, Prior and Informed Consent (FPIC) procedure. Under the Environmental Framework Act, it is stated that one of the main duties of the National Environmental Authority (NMA) is to ensure that the FPIC principle is applied in decision-making processes that regard the living area of Indigenous and tribal people. To date, the application of FPIC is not yet regulated.

4.2.6.5 Draft Bills

Towards the protection of Indigenous and tribal peoples, two draft Bills have been prepared by the GOS and are pending approval, as presented in table 4.9.

Table 4.2 Pending draft bills for land rights of Indigenous and tribal peoples

Pending draft bills
Draft Act on Protected Village Areas
On December 22, 2017, the National Assembly (DNA) approved the Act on Protected Village Areas[21]. This Act contained further amendments to the Decree on the Principles of Land Policy (S.B. 1982 no.10). The Act is essential for enhancing the protection of the people residing in the interior and serves as a significant steppingstone towards the Collective Rights Act. Although approved by Parliament, the then president never signed the law, and this law was never promulgated. It has therefore never had legal force and cannot be enforced as law. A decisive reason for this were the serious obstacles of Indigenous (including VIDS) and maroon organizations against this law. Although an initiative aimed at better protection of village areas can be seen as positive, fundamental objections to this law have been identified. There are conceptual, legal and practical objections to the law. While the principle of FPIC (free, prior and informed consent) is rightly placed in the foreground, the law itself was created without any input from the VIDS and other tribal communities. According to the VIDS, sufficient public participation could have prevented the identified gaps in the law. Among other things, the law misses its goal, namely legal protection of the residential areas and habitats of Indigenous and other tribal peoples in Suriname. The only thing that might be protected by this is a circle with a radius of 5 kilometers; which does not correspond at all to the reality. Furthermore, according to these communities, the ill-gotten rights of individuals and corporations are rendered superior to the rights of entire communities. The rights of the former are protected at the expense of those of the villages. In this law, this inequality between Surinamese who do not live in a tribal context compared to those who do live in a tribal context, is once again legally established; thus, reaffirming the pre-existing legal discrimination. Several provisions in the law are unclear and open to multiple interpretations, which could cause major problems in the future. The making of the intended maps of protected village areas can also cause great uncertainty. The law will only apply to future land issuance and the big question that arises is, of course, how much village land has not yet been issued. Also fundamental is the fact that this law does not provide a solution to the lingering land rights issue and may even have a negative effect on it. Finally, it is once again regretted by the communities that the working method used, once again showed how little value is attached to consultation and a truly participatory approach.
Draft Act on Collective Rights of Indigenous and Tribal Communities
The Council of Ministers approved the Draft "Collective Rights of Indigenous and Tribal Communities" Act[22] on June 15, 2021. The purposes of this Act are as follows: 1. The legal recognition of collective rights and collective legal personality of the Indigenous and Tribal peoples in Suriname. 2. Guaranteeing the legal certainty and legal protection of the collective rights of the Indigenous and tribal peoples. Following the initial stage, the draft Act was intended to be submitted to the State Council and subsequently to the National Assembly for further deliberation. However, notable alterations have been made to the draft Bill in 2023, resulting in its weakening. These modifications have drawn strong opposition[23] from the Association of Indigenous Village Leaders in Suriname (VIDS). VIDS is the legitimate and recognized interlocutor on behalf of

[21] Wet Beschermde Dorpsgebieden

[22] *Draft Act Indigenous and Tribal Peoples (Traditional Living Areas) Collective Rights*

(Ontwerpwet Wet Collectieve Rechten Inheemse en Tribale Volken (traditionele woon-en leefgebieden))

[23] Joint Statement of VIDS, VSG and KAMPOS Positions regarding the draft law Framework Act Collective Rights of Indigenous Peoples and Tribal People, 22 March 2023

Pending draft bills
the Indigenous people of Suriname towards the government and other organizations and participates in a number of policy bodies, committees and steering groups. The organizations of traditional authorities point out that the altered text of the draft law now states that collective property rights may be limited. They see this as a double restriction and also discriminatory because this restriction is very specifically imposed, by law, on Indigenous peoples and Tribal peoples. This amendment defeats both the purpose of the law and the legal protection of Indigenous and Tribal peoples as to their territories. VIDS, VSG and Kampos have also noticed that the phrase about "indicative maps" has been removed from the draft law, compared to the draft law as submitted by President Chan Santokhi in June 2021. The traditional authorities do not accept this, because in this way there is not even an indication of the residential areas and habitats of the Indigenous- and Tribal peoples, and therefore no legal certainty is given about these areas. Even if they are indicative maps, which can later be changed by law, they urgently need that basic legal certainty right now, and that is exactly what has been made mandatory in the aforementioned court judgments against the State of Suriname. It is not acceptable that this legal uncertainty should continue. The phrase from the original draft law should again be included in the law. It reads: "The Indigenous peoples and Tribal peoples have land rights to their respective traditional habitats and territories, which are indicated on the indicative maps attached to this law." As if the above changes in the draft law were not enough, the traditional authorities should read in the amendments of January 31, 2023, that according to the amended draft law, they must first apply for their collective land rights in order to receive it. And this will only be possible after a law has been made in the future that must regulate how the size and boundaries of the intended residential and living areas are definitively determined. If this amendment were to be approved, this law would, once again, not fulfill the obligations to which the State of Suriname is subject, since the land rights have still not been recognized and there is still no legal protection for the Indigenous peoples and tribal peoples. In addition, this amendment makes the operation of this article dependent on a future law that has not yet even been drafted. The traditional authority understands that this Act is a Framework Act, but it must at least offer basic legal protection, which would come from at least adding the indicative maps as being the areas over which land rights have been recognized with this Framework Act. VIDS, Association of Saamaka Traditional Authorities (VSG) and Kampos[24] reject this amendment and demand that this amendment, which violates our internationally recognized human rights and violates the obligations of the State of Suriname, be completely removed[25]. The law is currently in parliament for its approval.

Source. Compiled by RINA, 2023

4.2.6.6 International Treaties Regarding Indigenous Peoples

The GOS adopted and signed various international treaties. Unfortunately, key treaties regarding Indigenous Peoples have yet to be ratified or implemented.

- ✓ **ILO Convention nr. 169 (1989).** Suriname has not signed the Convention. This Convention describes essential measures and special rights for the protection, free expression and development of IPs in all necessary areas, both general and specific, including culture, religion, social, economic and land distribution.
- ✓ **UNDRIP, the UN Declaration on the Rights of Indigenous Peoples**. Adopted in 2007, the UNDRIP establishes a universal framework of minimum standards for the survival, dignity and well-being of Indigenous peoples and elaborates on existing human rights standards and fundamental freedoms as they apply to the specific situation of Indigenous peoples. The UNDRIP is not legally binding on States and does not impose legal obligations on governments, but like all human rights

[24] Kampos stands for: Collaboration of Tribal Peoples in Suriname consisting of the Kwinti, Aluku, Matawai, Paamaka, Okanisi and Saamaka

[25] De Ware Tijd (April 11, 2023): Traditional authority sweeps amendments to collective rights draft law off the table

instruments, it carries moral force. Suriname voted for its approval in 2007, but as of December 2020, there are no specific laws in force to enact Indigenous rights in accordance with this.

4.2.6.7 Court Rulings

In the past decades, Indigenous and Maroon communities have consistently raised their voices against the repeated violations of their human rights. These violations include the execution of mining, logging, nature conservation, and infrastructure projects on the lands they consider their ancestral territories, without their consent or even basic information. Regrettably, the State of Suriname has shown limited responsiveness to address these concerns, leaving these communities with few avenues for recourse. Consequently, various groups representing Indigenous and Maroon Peoples have sought assistance from the Inter-American Commission on Human Rights, seeking intervention and support in finding a resolution to these persistent issues.

Case of the Saramaka People v. Suriname (2007): The State of Suriname has already been condemned by the Inter-American Court of Human Rights in the Saramaka Lo's v. Suriname in 2007, in the course of which the Court has explicitly stated that FPIC must be applied before the state proceeds to the granting of concessions in the habitats of IPLCs.

To date, the following actions have been taken by the Government of Suriname in compliance with the judgement in the Saramaka case:

- ✓ The judgment has been published and translated;
- ✓ Compensation has been paid in agreement with the Court's ruling, including establishment of a Saamaka Development Fund;
- ✓ The government, in collaboration with the Saamaka people, produced a land use map, which was approved by the VSG;
- ✓ Demarcation was conducted by visiting all neighboring Maroon groups to determine the borders between the Saamaka and their neighbors. For example, the Saamaka and the Matawai agreed that the borderline between their territories is the right bank of the Saramaca River and the left bank of the Suriname River;
- ✓ Existing (logging) concessions have been withdrawn and been transferred to "community forest."

Some of the orders of the Court have not yet been carried out. The State has not complied with its duty to title Saamaka land. Neither have the Saamaka, or other Indigenous and Maroon groups, been granted legal recognition, including the right to hold collective title to their territory and resources. Furthermore, the State has thus far failed to adopt a legal structure recognizing the rights of the Saamaka (and other Indigenous and tribal) people to give or hold their free, informed, and prior consent regarding development projects on their territory.

Case of the Kaliña and Lokono Peoples v. Suriname (2015): In 2015, the State was again condemned by the Inter-American Court of Human Rights. This concerned the establishment of three nature reserves, namely the Wia Wia, Galibi and Wanekreek [creek] Nature Reserve within the territory of the Kaliña and Lokono Indigenous tribes in eastern Suriname. Among other things, their access to the area was limited due to the protection of sea turtles. In addition, mining operations were also carried out in a part of the Wanekreek nature reserve. With regard to nature reserves within traditional territories of Indigenous people, the Court held that the communities may reclaim parts of their territories, which border to the nature reserves and that their collective rights must also be weighed as part of the general interest pursued by the State in the establishment of the reserves.

Due to the constraints imposed on the Indigenous in nature reserves, the Court considers that there must be compatibility between the safeguarding of protected areas and adequate use and enjoyment of traditional territories. The Court believes that a protected area consists not only of biological aspects, but that the socio-cultural dimensions of a protected area should also be included. This requires an

interdisciplinary and participatory approach. In its judgment the Court indicates that the criteria for effective participation, access and use of their traditional territories and the benefits of conservation are to be evaluated by the State.[26] With regard to the mining activities in the area, the Court concluded that the State has failed to implement effective participation, no Environmental and Social Impact Assessments were carried out and the benefits of the mining project were not shared with the Indigenous.

The judgement of the Court consists of a number of measures:

1. Restoration of Kaliña and Lokono Indigenous tribes such as restitution to the Indigenous of land issued to third parties or compensation; immediate stop to the allocation of land in their territory; no restrictions on use and enjoyment, etc.;
2. Collective compensation by, among other things, setting up a community development fund of one million dollars (US$ 1 million) ;
3. Measures to obtain redress by translating and publishing the judgment;
4. Security provided to prevent a recurrence among other things by recognition of the collective legal personality, delineation / demarcation of traditional territory, and provision of collective title to ownership, etc.;

Due to the fact that previously Suriname did not comply with judgments of the Court and all Indigenous and tribal peoples must be protected, the judgment of the Court is among other things that legal recognition of the collective legal personality of all Indigenous and tribal peoples in Suriname should take place within two years; within three years legal recognition of collective ownership rights and within two years measures for effective collective access to administration of justice.

With regard to the use of the territories of the IPLCS it was stated that the following must be achieved within the next two years:

- Effective participation processes;
- Preliminary social and environmental impact assessments for projects that may affect their territories;
- IPLCS should share in the benefits from projects in their territory.

In addition to the abovementioned measures, the ruling also has financial consequences for the State. It is responsible for the costs as follows: US $ 15,000 to VIDS and KLIM jointly, US $ 10,000 to Forest Peoples Programme, and for the expenses related to the visit of the Court to Suriname in August 2015, US $ 18,141.65. If the State fails again, this will only increase the cost to the State[27].

To this day, successive governments have failed to uphold, honor, and enforce the Kaliña & Lokono judgment of 2015, leaving Indigenous peoples in a state of ongoing legal uncertainty. The only action the Government of Suriname had taken in compliance with the judgement in the Kaliña and Lokono case has been translation of the judgment in Dutch and Sranantongo, and its publication in national newspapers[28].

4.2.6.8 Recent Events regarding land rights of Indigenous and tribal communities

On May 2, 2023, there was an insurrection in the vicinity of Pikin Saron[29], with violence being used, both by Indigenous activists and armed forces. Several people were killed and injured under dubious

[26] Case of the Kaliña and Lokono Peoples v. Suriname, Official Summary issued by the Inter American Court

[27] Conservation International (2016): Advisory Report Amendment Nature Conservation Legislation in Suriname - Amendment Nature Conservation Legislation in Suriname by N. del Prado

[28] VIDS Statement 7 May 2023: Fight for recognition of collective rights intensifies

[29] Ibid

circumstances. In response to this crisis, an emergency meeting was convened on the same day with cluster ministers. During the meeting, the Indigenous delegation, represented by VIDS and OSIP, presented a series of demands in order to address the situation:

1. Repeal of all land titles issued in Indigenous territories, with written evidence that they have indeed been withdrawn;
2. Independent investigation into the circumstances of fatalities;
3. State assistance in funeral expenses of the persons who have died;
4. State assistance and guidance for survivors and victims;
5. Release of those arrested who have been wrongfully or unlawfully arrested.

Other matters were also discussed during the emergency interview. This includes the immediate provision of “beschikkingen” (ministerial orders) to new village authorities, and employment for the villages, including in their own area in which concessions have currently been wrongly issued. Furthermore, a rapid follow-up consultation was also requested to monitor the implementation of these matters. Up to this point, there has been a notable absence of any follow-up consultations or substantial information regarding recent events. Regrettably, VIDS has observed government reports characterizing the situation as involving "a gang" or "criminals." Furthermore, VIDS is concerned that the government appears to view the insurrection near Pikin Saron solely as a criminal issue and refuses to accept responsibility for the events that have transpired. This approach fails to acknowledge the complexities of the situation and undermines the urgent need for meaningful engagement and resolution.

During the commencement of the deliberations regarding the Framework Law on Collective Rights dated May 4, 2023, the President, who submitted the law to the National Assembly, left Parliament. The vice president has been out of the picture for a long time. In the Assembly, a unilateral and incomplete overview has been given of orders issued to third parties within Indigenous residential and living areas in Para. Unidentified surveyor maps were used as a reference. Assembly members of almost all political parties make statements that indicate that the legislator wants to keep the Framework Law on Collective Rights on the back burner, for example by sending it back to the government for adjustments, more discussions and/or further changes. The little attention that the government and parliament give to the full recognition and guarantee of the rights of the Indigenous people increases the legal uncertainty among the Indigenous peoples in Suriname.[30]

4.2.6.9 Concluding remarks

- Although the Protected Village Areas Act was approved in December 2017 in the National Assembly, the law has not yet been promulgated.
- A variety of shortcomings in the environmental legislation threatens the sustainable livelihoods of Indigenous peoples, who depend for their daily survival on products obtained from their natural environment. Commercial logging, gold mining, other extractive activities and infrastructure works near villages are destroying, polluting and dispersing food sources, while some villages are victims of illicit acts by the state and illegal prospectors.[31]
- Indigenous peoples have little or no say in policy plans and measures, projects and decisions of the government, which seriously affect their living areas and way of living, nor is FPIC or actual participation formalized. There is also little or no say in the creation and implementation of development plans and projects, even if these are intended on paper for Indigenous and tribal peoples[32].

[30] VIDS Statement 7 May 2023: Fight for recognition of collective rights intensifies

[31] Vids, Baseline Report of the Situation of Indigenous Peoples in Suriname 2020

[32] Ibid.

- The international treaties and human rights declarations that Suriname has ratified and cosigned have still not resulted in the necessary legislation for the recognition, respect and protection of the rights of Indigenous peoples, in spite of the judgement by the Inter-American Human Rights Court in 2015 and many international reminders. In addition, Suriname has not yet ratified ILO Convention 169, which provides for the protection of the rights of Indigenous and tribal peoples. As a result, the Indigenous and tribal peoples and their territories are unprotected in the Surinamese legal system, and they have no legal remedies available to oppose the countless unlawful and unwarranted acts against them by the government, companies, organizations and individuals[33].
- Child Labour is not an issue in Suriname and is regulated by law.
- Several mining exploration and exploitation activities take place on, or nearby archaeological sites as shown in figure 4.7.

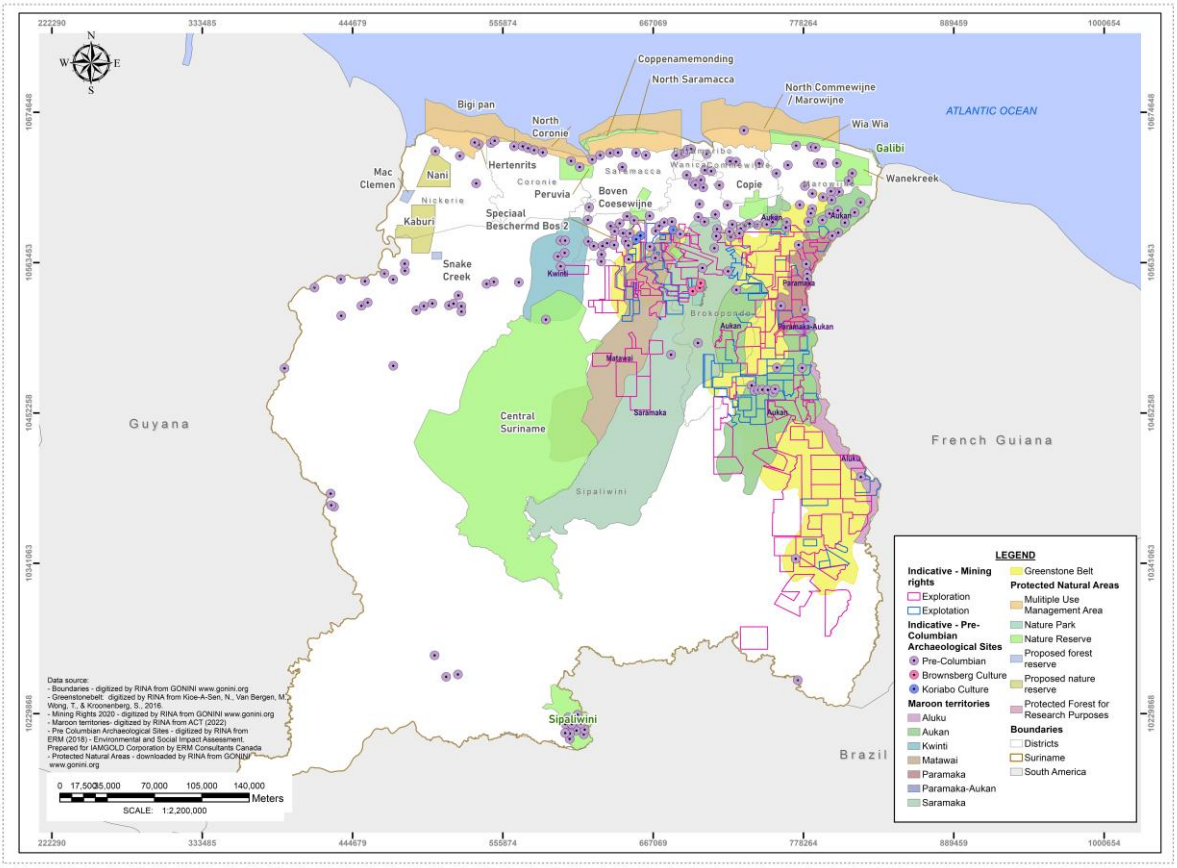


Figure 4.4: Mining exploration and exploitation on archaeological sites

[33] Ibid

4.2.7 Grievance mechanism

In terms of economic development, job creation, and resource extraction, the mining sector plays a crucial role in Suriname. However, mining activities can also have significant social and environmental impacts on affected communities and ecosystems, as mentioned previously. A grievance mechanism is a formal process designed to address and resolve complaints, concerns, or grievances raised by individuals or groups regarding the actions, decisions, or conduct of an organization, institution, or entity. Grievance mechanisms are particularly crucial in situations where power imbalances exist, such as between corporations and communities, employers and employees, or governments and citizens.

4.2.7.1 Local Context

Suriname currently lacks a law regulating a comprehensive national-level grievance mechanism that spans across all sectors. There is, however, legislation that provides for the handling of objections and appeals but a well-worked-out mechanism is absent. The Forest Management Act 1992 specifically provides for a provision for the case when customary rights of tribal communities are being violated. In accordance with the Forest Management Act, the customary rights of tribal inhabitants of the interior, in respect of their villages and settlements, as well as their agricultural plots, must be respected as much as possible. And in case of violations of these customary rights, an appeal in writing may be made to the president, which appeal is to be drawn up by the relevant traditional authority of the tribal inhabitants of the interior stating the reasons for the appeal. The President must appoint a committee to advise him on this matter. This mechanism in the law has never been properly implemented by the government and has been one of the reasons why traditional communities have filed a case with the Interamerican Court, more commonly known as Saramaka People vs Suriname.

This Saramaka case[34] addresses Indigenous peoples' rights to their land and their struggle against encroachment by mining and logging companies carrying out activities on their territory on the basis of concessions granted by the State without consultation with the Indigenous people. The Court found State committed violations of the American Convention against the members of the Saramaka people, a tribal community living in the Upper Suriname River region, by failing to adopt effective measures to recognize the Saramaka peoples' right to the use and enjoyment of the territory they traditionally occupied and used. The State also failed to provide the Saramaka people with the right to effective access to justice for the protection of their fundamental rights, particularly the right to own property in accordance with their communal traditions. Lastly, the State failed to adopt domestic legal provisions in order to ensure and guarantee such rights to the Saramaka people. To date, these domestic provisions have not been adopted (See Memo: 2 Bills before Suriname's Parliament are still under approval).

The Mining Act contains a provision for dispute settlement. It is stipulated in article 62, that disputes about the interpretation, application or applicability of the Act, between the State and the holder of a mining right, or between the latter and a third, will be subject to the decision of the Subdistrict Court in the First Canton. It is further stipulated that except in matters concerning taxes, dues and other charges including those of the determination of the gross proceeds for the calculation of income tax, the Minister may agree with the applicant for a mining right that any dispute under the granted right, including the allegation that there is a dispute that arises between the State and the mining beneficiary and that cannot be resolved amicably, shall be subject to arbitration. It can be agreed that the arbitral decision shall be enforceable by or on behalf of any court or tribunal within or outside Suriname.

There is a difference between a dispute settlement and a grievance mechanism. Whereas dispute settlement is referred to as the process of resolving disputes between parties, a grievance mechanism is a procedure that provides a clear and transparent framework to address complaints. This mechanism is clearly lacking in the Mining Act and has just recently been elaborated.

With the promulgation of the Environmental Framework Act in 2020, Environmental Social Impact Assessments (ESIAs) became mandatory. As part of the ESIA process, a grievance mechanism is typically included in the ESIA report. However, it is not legally mandatory. Nor do the Environmental Act

[34] Saramaka People v. Suriname, Preliminary Objections, Merits, Reparations and Costs, Judgment, Inter-Am. Ct. H.R

and the draft ESIA regulations specifically dictate the establishment of a grievance and redress mechanism. In addition, although they are often part of ESIA reports, these mechanisms are not being enforced.

While there is no legal obligation to have complaint-handling mechanisms, some ministries choose to implement them in practice. The Ministry of Spatial Planning and Environment (ROM) installed the Interdepartmental Complaints Committee for Spatial Planning and Environment on July 22, 2021. This initiative aimed to initiate a temporary enforcement mechanism until the Environmental Framework Act becomes fully operational. By setting up this working group, ROM seeks to address concerns and complaints related to spatial planning and environmental issues in the interim period. [35]

The Citizen Information Unit (BIU) of the Ministry of Public Works has the primary goal of facilitating and disseminating information related to various procedures and services provided by the ministry. This includes providing guidance on the necessary steps to obtain permits and other services. Additionally, the BIU handles the intake of applications for services, aiming to streamline the process and minimize personal contact between clients and ministry employees. Another crucial aspect of the BIU's role is to receive complaints from the public and ensure their proper distribution to the relevant departments for resolution. The Unit is responsible for overseeing the handling of these complaints and ensuring a satisfactory resolution. It also conducts field orientations and establishes contacts with RR (Regional Representatives) and DR (District Representatives) members, fostering communication and collaboration. Lastly, the BIU communicates ministry actions and updates to citizens who have filed complaints, keeping them informed throughout the process. [36.]

Individuals also have the opportunity to submit petitions directly to Ministers and the President as a means of addressing their concerns.

In addition, District Commissioners (DC), who serve as the administrative official and head of a district, may implement a grievance redress procedure specifically designed for residents residing within their district. An illustration of such a procedure may involve the complainant submitting their grievance at the district office, followed by DC officials conducting on-site investigations to gather information about the situation. Based on their findings, the officials will render a final judgment on the grievance. If the resolution requires the involvement of other government departments, the DC will formally request their assistance in writing. The DC subsequently strives to find a mutually beneficial solution. Most of the grievances are related to commercial land/resource concessions and public infrastructure.

Complaints can also be raised to the local police. The police tend to be involved when local residents believe that for example commercial mining or logging operations are either illegal or are having clear negative impacts on them; when there are disputes among local forest land users, e.g., about pollution from small-scale mining; or when commercial mining or logging companies believe local residents are unlawfully interfering with their operations. [37.]

Furthermore, business entities, individual companies, or projects operating in Suriname may have their own grievance mechanisms as part of their corporate social responsibility initiatives. The company-specific grievance mechanisms often prioritize effective communication, stakeholder engagement, and the provision of timely and satisfactory remedies.

4.2.7.2 REDD+ in Suriname

As Suriname's government seeks to use REDD+ as a tool to conserve Suriname's forests while promoting sustainable development, it was required to develop a grievance redress mechanism (GRM). The primary purpose of GRMs was to ensure that national stakeholders who wish to raise concerns

[35] https://cds.gov.sr/de-boodschap/interdeparmentale-commissie-klachten-ruimtelijke-ordening-en-milieu/?fbclid=IwAR3KI6WONvlhBv08w_S5ZxINYhNp8RjEUDwsbu5mqcPuZHRw8arMFOdV9g0

[36] Ministry of Public Works: https://gov.sr/ministeries/ministerie-van-openbare-werken/

[37] Draft Suriname REDD+FGRM Assessment Report 2013

about actual or potential negative impacts of REDD+, or who have a dispute with government or other REDD+ stakeholders, have an accessible forum for raising and resolving their concerns and disputes. As stated in the "First Summary of Information on REDD+ Safeguards of Suriname (2020)" report, a REDD+-specific Grievance Redress Mechanism (GRM) has been developed. This mechanism enabled the registration, categorization, and resolution of grievances related to REDD+ initiatives[38]. However, with the termination of the REDD+ project, no further details have been given to the introduction of this mechanism.

In the document "Development of a REDD+ Grievance Mechanism for Suriname Final Design Report" of January 2019, recommendations were made for the mandate, design and operation of a GRM structure (dedicated office) for REDD +. Some of the design features included the following criteria.[39:]

- ✓ Accessible: being known to all stakeholder groups for whose use the GRM is intended, and providing adequate assistance for those who may face particular barriers to access;
- ✓ Predictable: providing a clear and known procedure with an indicative timeframe for each stage, and clarity on the types of process and outcome available and means of monitoring implementation;
- ✓ Transparent: keeping parties to a grievance informed about its progress and providing sufficient information about the mechanism's performance to build confidence in its effectiveness and meet any public interest at stake;
- ✓ Legitimate: enabling trust from the stakeholder groups for whose use the GRM is intended and being accountable for the fair conduct of grievance processes;
- ✓ Equitable: seeking to ensure that aggrieved parties have reasonable access to sources of information, advice and expertise necessary to engage in a grievance process on fair, informed and respectful terms;
- ✓ Rights compatible: ensuring that outcomes and remedies accord with internationally recognized human rights;
- ✓ Based on engagement and dialogue: consulting the stakeholder groups for whose use they are intended on their design and performance and focusing on dialogue as the means to address and resolve grievances;
- ✓ Enabling continuous learning: drawing on relevant measures to identify lessons for improving the mechanism and preventing future grievances and harms.

Since the REDD+ project has ended, this mechanism will no longer be used. However, during an interview[40] with NIMOS it was indicated that the preliminary work that has been done for the REDD+ project was to be used to set up a Grievance and Redress Mechanism at the Legal Office within NIMOS. The legal basis is the Environmental Framework Act, in which a provision has been made in Articles 45 and 46 for objections and appeals. The Act stipulates that the party concerned, whose interests are directly affected by a decision taken under this Act, can, within thirty days after being notified of the decision, submit an objection to the Director. The Director shall decide on the submitted objection within thirty days.

Article 46 which regulates the appeal, stipulates that a party concerned whose interests are directly affected by a decision taken under this Act, can, within thirty days after being notified of the decision, lodge an appeal at the Minister under whom the NMA falls as far as budgetary matters are concerned. The aforementioned appeal shall be decided within one month after the date of lodging the appeal.

[38] Government of Suriname (2020). First Summary of Information on REDD+ Safeguards of Suriname. Paramaribo, Suriname.

[39] Suriname REDD+ GRM Final Design Report CBI, January 31, 2019

[40] Personal Communication with Director Legal Office, Gina Griffith and Legal Officer, Rafaella Doest, dd.23 May 2023

NIMOS, currently in the transition phase to become the National environmental Authority (NMA) intends to utilize a grievance redress mechanism as a national instrument to address environmental issues across all sectors.

4.2.7.3 New Grievance Redress Mechanism for the mining sector of Suriname

As part of the SCSD project, a Grievance Redress Mechanism and Implementation Plan was prepared. This has been approved by the Government and a number of training courses have been conducted; the GRM is ready to be operationalized.

The SCSD Project is classified by the WBG as Category B, meaning that the potential adverse social and environmental impacts on human populations or environmentally important areas are site-specific; few if any of them are irreversible and in most cases mitigation measures can be designed. Nevertheless, a Grievance Redress Mechanism (GRM) was required to ensure that any stakeholder who feels affected by the project activities can convey their grievance(s) and obtain a response in a reasonable amount of time. In order to create easy access to the GRM, multiple options to submit/ file a complaint should be given and prompt responses to the grievance(s) should be provided by the Project proponent.

The main objective of the SCSD GRM is to provide a transparent and credible process of resolving grievances regarding the Project for fair, effective, and lasting outcomes that satisfy all parties involved and based on World Bank policy and standards. It also aims to build trust and cooperation as an integral component of broader community consultation that facilitates corrective actions.

The new GRM aims to:

- provide affected stakeholders with tools and means for making a complaint or resolving any dispute that may arise during the project;
- ensure that appropriate and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants; and
- serves as a first line of response for affected project stakeholders while also providing an avenue to resort to judicial proceeding

The GRM contains a process description with an associated timeline. It is notable that there is a 30-day period for investigation and resolution, while practice shows that taking into account the traditional decision-making process among Indigenous and tribal peoples, it can take much longer. This, regardless of the complexity of the grievance topic. Annex 4 of the GRM does include a protocol for meetings with Indigenous and tribal people and compliance with this protocol will certainly result in an extension of time slots in practice.

This GRM is specifically aimed at the implementation of the project, using project resources and structure. It is suggested that after completion of the project and in the case of successful implementation, the GRM be continued and incorporated in the mining legislation. Developed specifically for the SCSD Project, it must now become part of the sector requirements for all mining activities and provide a platform to raise grievances and seek resolution in matters specific to the mining sector. A copy of the GRM can be found in Appendix J.

4.2.7.4 Current sources of grievance and disputes identified

There are currently numerous grievances and disputes that need to be resolved. The main sources of grievance and disputes identified include:

- ✓ Concessions overlapping with community claims, protected areas, and with other concessions;
- ✓ Outstanding land rights issues present a major risk of grievance and dispute;
- ✓ The granting of timber and mining concessions within the living areas of Indigenous Peoples and Local Communities (IPLCs);

- ✓ Commercial logging, gold mining, other extractive activities and infrastructure works near villages are destroying, polluting and dispersing food sources, while some villages are victims of illicit acts by the state and illegal prospectors;
- ✓ There is no or less clarity about existing mechanisms for grievance and dispute resolution with regard to non-conservation land uses and users in forest areas (mining, logging, infrastructure, conversion to agriculture);
- ✓ Absence of a national grievance redress mechanism may result in managing limitations to address grievances and disputes correctly and effectively.
- ✓ In Suriname, there is a concerning disregard for the customary rights and land rights of Indigenous Peoples and Local Communities (IPLCs). Despite their established rights, IPLCs face significant challenges and obstacles in having their rights recognized and respected within the country. This lack of attention and consideration for their rights has detrimental effects on IPLCs' livelihoods, culture, and overall well-being. It is crucial to expedite the legal recognition of Indigenous peoples as a collective community and a legal entity in order to safeguard their rights. The recognition and protection of their collective rights, including land rights, traditional authority, Free, Prior and Informed Consent (FPIC), traditional knowledge, and other rights outlined in international frameworks like the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), should be prioritized and granted.

4.2.8 Main concerns identified during the stakeholder consultations

The following presents a summary of the main concerns identified during the stakeholder consultations with Indigenous and tribal community members and authorities in the visited communities, and other stakeholders during the stakeholder consultation workshops.

Concerns of Indigenous and Tribal Communities

- Land rights of Indigenous and tribal communities are still not recognized by the government authorities, which jeopardizes benefit sharing, which is left to the discretion of the mining companies..
- An international advisory coordination committee or responsible group should oversee the implementation of the new regulatory framework.
- There is currently no specific buffer zone or no-go zones to limit the implementation of mining projects. It is important to protect the environment to ensure the livelihood of the population.
- Communities, particularly Indigenous and tribal communities, need support in their organization and formalization.
- Cut trees from deforestation for new mining exploitation projects are currently destroyed as the companies say that they cannot give them to the communities, which is not sustainable. These could be used to build boats or as timber for the community development.
- Blasting for mining exploitation makes the communities tremor and generates stress within community members and fear of potential future earthquakes.
- Community leaders do not always have the skills to negotiate mining agreements with large mining companies. Capacity building is needed for the leaders of the communities regarding the administration of mining concessions and contracts within their land
- Contamination of water and soil have changed the way of life of local communities. The number of fish in the rivers has decreased, and the activities have driven away wildlife. Indigenous and tribal communities who live from the land now have to go further to hunt and fish.
- Social benefits should be clearly defined as a percentage of profit or amount per ounce or similar, in the agreements with mining companies to allow clear benefit sharing calculations.
- Community authorities, especially Indigenous and tribal community authorities, need training in administrating income from benefit sharing

- Communities need new income generating opportunities, not only direct employment but also in the sale of supplies and services.
- Water is becoming increasingly contaminated by mercury and cyanide from mining, jeopardizing the health of people from consuming such water and fish, Additionally, it affects the possibility of selling fish as an income generating activity (such is the case for French Guyana where they buyers are now scared of buying contaminated fish) from Guyana
- Gender issues and violence are problems in various Indigenous communities, often because of alcohol abuse, prostitution, and illegal workers.
- Maps used by government and other organizations do not always represent the reality of Indigenous and tribal communities and need to be revised. Accurate and participatory mapping is required, especially for the Indigenous and tribal communities and protected areas.
- Gonini website is an important source of information but needs to be updated on a regular basis,
- Community engagement is necessary for the development of mining projects. Therefore, stakeholders request that stakeholder engagement be conducted by trained professionals.
- Regions for mining activities and environmental reserve areas are not clearly defined.

Concerns of mining and private Companies, Donor agencies, NGOS and Government institutions

- Land rights on Indigenous land are not always considered in the mining company agreements.
- Compensation for land use and resettlement is not clearly defined
- There is currently no clear regulation regarding the sustainable use of timber resulting from deforestation associate with project development, and its potential use within the communities.
- Buffer zones are not clearly defined
- Mining closure requirements are not clearly defined in the regulation
- ASM is not clearly defined within the mining regulation
- Maps are incorrect and need to be updated in a participatory process with Indigenous and tribal communities.
- Until 2023, there was no grievance mechanism. The new mining Grievance Mechanism developed in 2023 needs to be socialized and implemented to prove its efficiency.
- It is necessary to clearly define who will be responsible for the implementation of the SESA
- Some support programs are duplicated within the various government and non-government agencies and other programs are missing.
- A reliable and updated tool, such as the GONINI Website, is important to share information, mining activities and areas of influence for all mining projects.
- Community leaders need to build their capacities on community organization and conflict management. Indigenous and tribal communities do not always share the same customs, cultures and traditions; these should be taken into consideration.
- There is a problem of mercury contamination in water and fish. Monitoring of water and health issues should be organized to follow the spread and extent of contamination.
- Benefit sharing should be clearly defined with specific numbers or percentages so as to eliminate any ambiguities during exploitation activities of the mine.
- Communities do not have the skills to manage shared benefits from the mining projects.
- Communities request better employment opportunities for the mining community members.
- The legal framework needs to be strengthened and monitoring requirements for mining companies need to be created.

4.2.9 Key findings regarding the legal and regulatory framework

Based on the above, the implementation of the SESA needs to be undertaken by the main authority responsible for the mining sector, the MNR. Moreover, the legal and regulatory framework lacks specificity, guidelines, and regulatory limits on discharge and emissions for mining activities. Clear

standards and monitoring strategies are necessary to ensure its enforcement. Moreover, there is currently indiscriminate use of mercury and other toxic substances, particularly in the gold mining industry. The SESA study further showed that the Mining contracts are not standardized and therefore lack transparency. The SESA study confirmed that many ASM workers are not formalized and are often operating illegally. Presently, the government has limited capacities and resources to address ASM's negative environmental and social impacts.

Numerous issues relating to Indigenous and tribal communities were identified, the main one being their recognition as authorities and their land rights. In 2023, the Government developed the new SCSD grievance mechanism that now needs to be socialized and implemented. Finally, a number of concerns were identified during the stakeholder consultations visiting Indigenous and tribal communities and during the stakeholder workshops, and were summarized, all of which were addressed in the Action Plan.

4.3 IMPLEMENT EFFECTIVE ENVIRONMENTAL PROTECTION AND MITIGATION MEASURES THAT PROMOTE SUSTAINABLE MANAGEMENT OF RESOURCES AND THE ENVIRONMENT

Mining licensing and permitting are key elements that help promote sustainable management of resources and the environment. The following explains the current situation regarding mining licensing and permitting and the responsibilities of the government agencies. In the mining sector, two government institutions play an important role when it comes to licensing. The Ministry of Natural Resources for the mining permit and NIMOS for the Environmental permitting.

4.3.1 Mining licensing and permitting procedures of the Ministry of Natural Resources

Five types of mining permits, or rights, can be obtained from the Ministry of Natural Resources: reconnaissance, exploration, exploitation, small-scale mining, and quarrying building materials. Permits can be obtained for bauxite, radioactive minerals, hydrocarbons, other minerals, and building materials, though radioactive minerals and hydrocarbon rights can only be granted to state enterprises. Rights are only granted to those entities that have a proven financial position, technical and organizational competence, and experience with regard to the mineral in question. Upon termination of the right, the holder must, to the satisfaction of the Minister, take the necessary steps to respect public safety, conserve the deposit, rehabilitate the area and protect the environment[41].

Each of the types of permits has reporting requirements that are outlined in the Mining Decree. Reporting is to be made on a quarterly or annual basis (depending on report content) and information is required on activities, production levels, and possible and probable reserves, with maps, geological data, levies and taxes paid and payable, investments, and number of employees (including nationality, age and wages paid)[42].

The application for the various mining rights is made in the same way, but there is a difference in maximum term, size, rights and obligations. Table 4.2 provides an overview of the mining application process

[41] Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2017). IGF Mining Policy Framework Assessment: Suriname. Winnipeg: IISD.

[42] Organization of American States. Secretariat for Multidimensional Security. Department against Transnational Organized Crime (March 2023). On the trail of illicit gold proceeds: strengthening the fight against illegal mining finances : Suriname's case.

Table 4.3 Terms of licensing according to the type of mining right

	Mining right				
	Reconnaissance	**Exploration**	**Exploitation**	**Small-scale mining**	**Building materials**
Term	Two years	Three years	25 years	Two years	Five years
Renewable	Yes, one-year extension possible	Yes: Two-year renewals, can do twice. Area covered by the right reduced by 25 per cent with each renewal.	Yes, can be extended for up to 25 years	Yes, renewable for two-year periods	Yes, renewable for periods of up to five years
Maximum size	200,000 ha	40,000 ha	10,000 ha	200 ha	400 ha
Transferable	No	Yes	Yes	No	Yes
Requirements and obligations	• Quarterly reports • Notification of discoveries • Annual reports • Final report	• Detailed workplan • Proof of bank deposit or bank guarantee to cover expected costs for first period of the right • Start within three months • Follow work program • No breaks in activities longer than four months • Detailed workplan submitted each year • Notification of discoveries • Minimum spend • Complete and accurate records • No commercial production • Quarterly and annual reports	• Application must include: program with schedule; total expected revenue; production capacity to be installed; estimate of investment capital; local goods and services used; training and knowledge transfer to Surinamese nationals; and program for rehabilitation. • Timely start • Annual estimate of coming production, exports, levies, import requirements • Reports of technical and financial data • Annual report on reserves • Quarterly reports on activities • Annual report	• Quarterly report on invested capital, operating cost, number of workers (by age, nationality), tonnage of earth moved and minerals mined • Pay required levies	• Post-mining rehabilitation plan • Quarterly reports on progress and results of exploration • Notification of intent to start quarrying • Keep daily records of quantities produced • Quarterly reports on exploitation • Annual report, with estimate of activities for coming year • Measures to protect ecosystems and occupation health and safety

Source: Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2017). IGF Mining Policy Framework Assessment: Suriname. Winnipeg: IISD.

4.3.1.1 Mining application procedure for new and renewal of mining license

The application procedure for Mining Rights is regulated through the Mining Decree**.** Based on article 10 of the Mining Decree, the following application procedure is followed to obtain mining rights:

1. The application to obtain a mining right will be made in the Dutch language and sent in writing in triplicate to the Minister. All documents must be dated and signed stating the capacity of the signatory.
2. The application must state all necessary information about the applicant, in any case:
   a) with regard to natural persons: surname and first names, date and place of birth, nationality, residency in Suriname and address;
   b) with regard to a legal entity or partnership: name, type of legal entity or partnership, the law applicable to it, the place of incorporation and establishment, name and address of a representative in Suriname, the registered, issued and paid-up capital as well as the names

and addresses of the directors and those who may link the legal entity or partnership to third parties.

The following will also be added to the first application:

a) with regard to natural persons: an epitome from the population registry or proof of identity;

b) with regard to legal entities and partnerships:

- ✓ a certified copy of the articles of the statutes;
- ✓ a copy of the most recently published balance sheet with operating statement, profit and loss account, report from the accountant and the Supervisory Board or similar body and the approval of the annual accounts by the General Meeting of Shareholders or similar body;
- ✓ a list with surnames and first names, nationality, profession and address of the chairperson and members of the Supervisory Board or similar body;
- ✓ the credentials of the signatory relating to legal entities and partnerships (met betrekking tot rechtspersonen en maatschappen).

Based on the above information, table 4.3 presents the updated process requirements for new license applications[43].

Table 4.4 New Mining License Application Process

Phase /Stage	Action (new application)	Department / Head
1.	The applicant makes an appointment by telephone to submit the documents for the new application at a specific time and date in duplicate: hard copy and digital.	GMD
2.	Documents are placed on the agenda and given a GMD number e.g., GMD 001/23	GMD
3.	**New application:** The map is sent to Database for screening (checking if the site has already been issued or if another application has been made). a) If it concerns an application for gold and other minerals, it goes to the Geology department for substantive screening. b) If it concerns an application for Building Materials, it will go to the Mining Inspectorate Department for substantive screening.	Database, Geology (Geo), Mine Inspection (MI)
4.	With the **new application**, a letter is sent to the Districts **Commissioner (DC) of that jurisdiction and the Director of Land Policy and Forest Management (GBB)** advice that the customer must take with him to the agency. The opinion is forwarded to the Secretariat. If the DC/GBB has no objection to the issuance, a draft Ministerial Order (*Concept beschikking*) & GMD advice ro be drawn up and signed by the Head of the department	Mining Rights (MBR) Secretariat DC GBB
5.	The Applications Department sends the draft Ministerial Order with underlying documents through the intervention of the Permanent Secretary of Mining At NH to the Minister. When the	Mining Directorate Minister

[43] Head of GMD, Ms. L. Sanne

Phase /Stage	Action (new application)	Department / Head
	Minister has signed the draft, it is elevated to a parent Ministerial Order *(Moederbeschikking*).	
6.	7 certified copies (*eensluidend afschrift*) of the parent Ministerial Order are made and they contain the same information as the parent Order. 1 of the 7 copies is provided with an adhesive stamp by **the Mining Rights Department.** All copies are provided with the signature of the Permanent Secretary of the Mining Directorate.	Mining Rights Mining Director
7.	The customer goes to **Mi-GLISS** with the original statement and pays for the stamp and transfer costs, then the C form is drawn up by GMD. The C form contains the same information but on a different piece of format paper. **Important:** drawing up a C-form/map "kaart" is an extra service to the customer because of the many mistakes made in the past.	Customer Mi-GLISS Mining Rights
8.	1 certified copy is sent to: a) Court of Audit of Suriname b) Permanent Secretary of the Ministry of Agriculture, Livestock and Fisheries c) District Commissioner of the resort where the right has been issued d) Head GMD e) Director of Tax Office f) Permanent Secretary of the Ministry of Land Policy and Forest Management g) Applicant	GMD
9.	The customer collects his copy from the Mining Rights Department (MBR). Note: Soon this is be done through the Communications Department.	Mining Rights

Source: Direct communication with Head of GMD, Ms. L. Sanne.

In the case of a second and subsequent applications, the required documentation does not have to be replaced if it is still valid, but the applicant will report the provision already made with the statement that this information is still applicable. However, if there is a change in the required documentation, this must be communicated to the Minister immediately. In addition, the Minister may at any time require additional information from the applicant for a mining right. Table 4.4 shows the renewal application process for mining license.

Table 4.5 Renewal of the Mining License Application Process

Phase / Stage	Action (renewal application)	Department / Head
1.	The applicant makes an appointment by telephone to submit the documents for renewal at a specific time and date in duplicate: hard copy and digital.	GMD
2.	Documents are placed on the agenda and given a GMD number (e.g., GMD 001/23)	GMD
3.	**Renewal application:** The map is sent to Database for screening (checking if the map and the information on it are the same as the previously submitted map in the previous application). a) If it concerns an application for gold and other minerals, it goes to the Geology department for substantive screening. b) If it concerns an application for building materials, it is to go to the Mining Inspectorate department for substantive screening.	Database, Geology (Geo), Mine Inspection (MI)
4.	The GMD advice is drawn up, signed by the acting Head of GMD and together with the draft Order for renewal sent through the intervention of the Permanent Secretary of Mining At NH to the Minister. When the Minister has signed the Order, such an Order is elevated to a parent Order.	Secretariat Director Mining Rights Minister
5.	7 certified copies (eensluidende afschriften) of the parent Order are made. These contain the same information from the parent Order. 1 of the 7 copies is provided with an adhesive stamp by Mining Rights Department (MBR). All statements are provided with the signature of the Permanent Secretary of the Mining Directorate.	Mining Rights Mining Director
6.	The customer goes to **Mi-GLISS** with the original statement and pays for the stamp and transfer costs, then the C form is drawn up by GMD. **Note:** The C form contains the same information but on a different piece of format paper. **Important:** drawing up a C-form/card is an extra service to the customer because of the many mistakes made in the past.	Customer Mi-GLISS Mining Rights
7.	1 certified copy is sent to: a) Court of Audit of Suriname b) Permanent Secretary of the Ministry of Agriculture, Livestock and Fisheries c) District commissioner of the resort where the right has been issued d) Head GMD e) Director of the Tax Office f) Permanent Secretary of Land Policy and Forest Management g) Applicant	Mining Rights

Phase / Stage	Action (renewal application)	Department / Head
8.	The customer collects his copy from the Mining Rights Department. **Note**: This is to be done in the near future through the Communications Department.	Customer Mining Rights Dept. Communication

Source: Direct communication with Head of GMD, Ms. L. Sanne.

For concession areas that are larger than the legally permitted size, negotiations are conducted at a strategic level. The research is to be carried out in accordance with the GMD procedure. The authorization is prepared and approved by Parliament.

Figures 4.4 and 4.5 show the process diagrams for the New Application Process and the diagram for the Renewal Application Process, respectively.

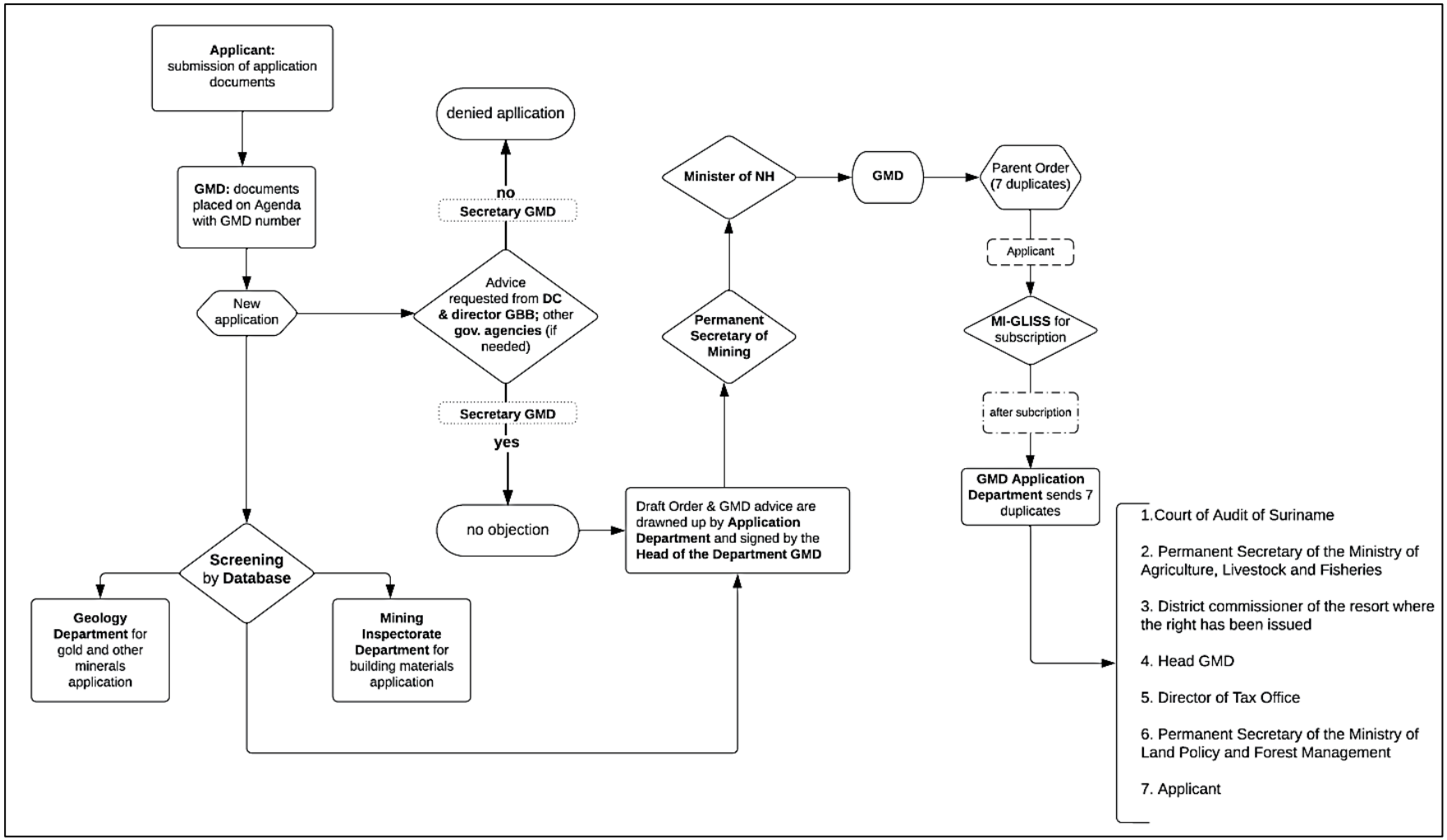


Figure 4.5: New Mining License Application Process diagram

Source. GMD, 2023

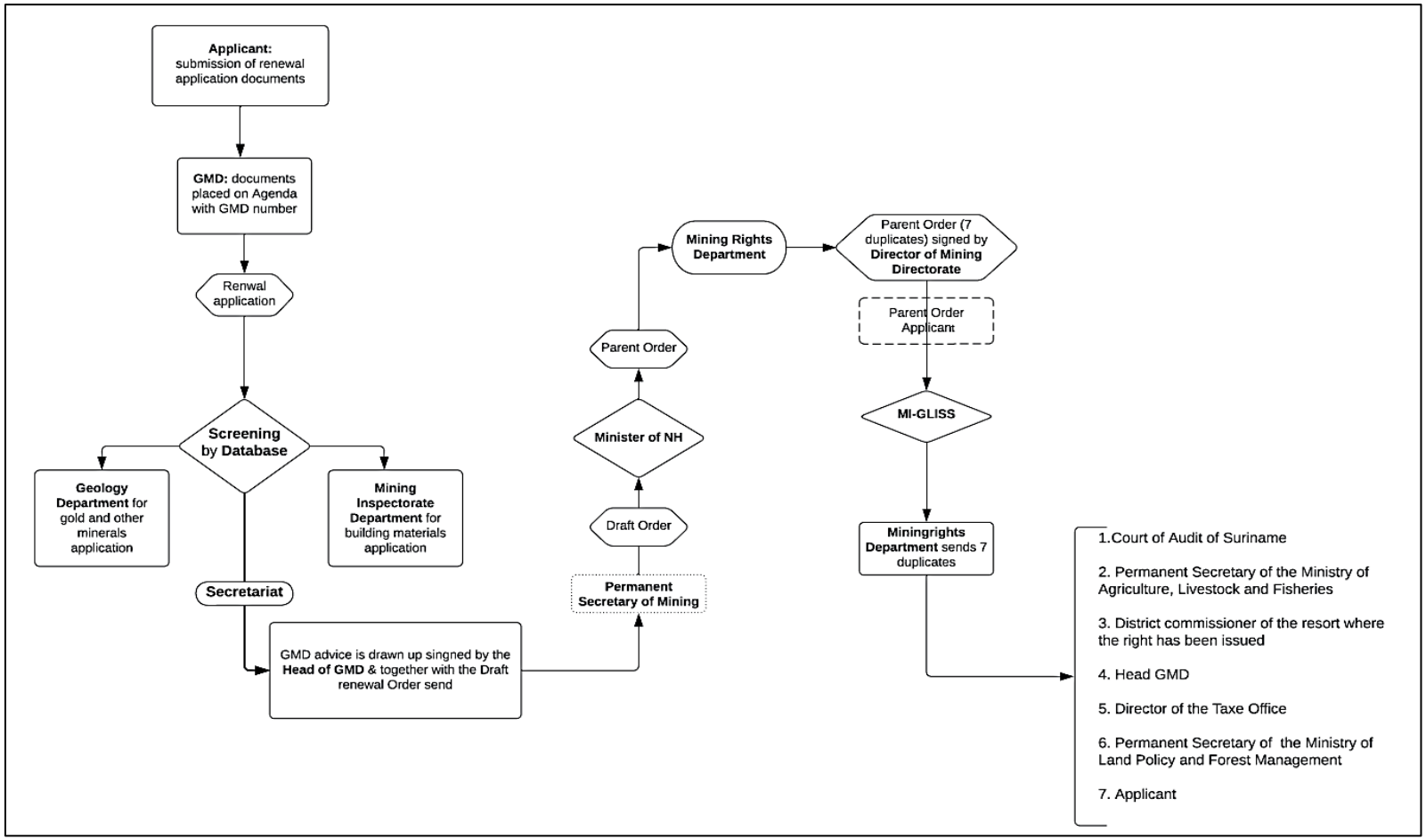


Figure 4.6: Renewal of the mining License Application Process diagram

Source. GMD, 2023

4.3.1.2 Application for hydrocarbon concession

The procedure is different when applying for mining rights with regard to hydrocarbons. In accordance with the Mining Decree and the Petroleum Act, Staatsolie has been designated as an agent of the State to manage and sustain Suriname's petroleum resources. Staatsolie[44] performs this institutional task through the Staatsolie Hydrocarbon Institute ('SHI'), which executes Staatsolie's powers to invite international and national oil companies that are ready and willing to commit capital, expertise and other appropriate resources to participate in the exploration and development of Suriname's petroleum resources. Open blocks are made available through competitive bidding rounds. Companies are invited to participate in bid rounds and instructions to Bid rounds are issued by SHI.

4.3.2 The National Institute for Environment & Development in Suriname as the responsible agency for environmental protection

The National Institute for Environment & Development in Suriname (NIMOS) was established on March 15, 1998, and is an autonomous government foundation, supervised by a Foundation Board. The day-to-day management and overall coordination of NIMOS is undertaken by the General Director. Currently NIMOS has 27 employees, of which 20 are employed on a permanent basis and the remaining on a project basis.

NIMOS consists of several offices, each tasked with specific responsibilities, namely:

1) Administration
2) Environmental & Social Assessment
3) Environmental Monitoring & Enforcement
4) Environmental Legal Services
5) Environmental Education & Public Outreach
6) Environmental Planning & Information Management
7) Environmental Funding & Investments (not operational).
8) Environmental Research (not operational).

The mission of NIMOS is to "*initiate the development of a national legal and institutional framework for environmental policy and management in the interest of sustainable development*" and driven by the following goal:

- Achieving National Environmental Legislation in the broadest sense of the word.
- Preparing and implementing Environmental Protection legislation.
- Coordination and monitoring of Compliance.

National environmental authority (NMA)

In 2020 the Environmental Framework Act (EFA) was approved by Parliament and has since then been in force. The National Environmental Authority has been created by means of this law. The intention is for NIMOS to transition into the National Environmental Authority (NMA). The NMA is to be responsible for the enforcement of the EFA. At present, NIMOS is in a transitional phase and is preparing to act as the NMA in the near future. A number of operational matters will change, and a number of policy documents are being prepared in that context. This includes a new organizational structure, internal management regulations, salary structure, job descriptions, etc.

For the EFA to be operational, a set of subsidiary legislation will need to be promulgated, most of which is already in draft form (see below).

1. ***Environmental and Social Impact Assessment*.** Although the EIA process has been administered by NIMOS since 2005, with the promulgation of the EFA it becomes mandatory. EIA regulations have been drafted and will immediately take effect after their promulgation.

[44] Instructions to Bidders ('ITB') for the Demerara Bid Round 2022-2023

2. ***Pollution and Standards*.** Environmental norms and standards will be developed under the EFA. This will be executed through implementation regulations. This includes the application of environmental permits and the rehabilitation of affected areas. The pollution regulations standardize the determination of contaminants, Maximum Allowable Concentration (MAC) values for the release of contaminants, and procedures for the rehabilitation of contaminated areas. Pollution regulations have already been drafted.
3. ***Waste and Hazardous Substances and Emergency Plans*.** The NMA will determine norms and procedures for handling of waste (collection, transportation, storage, and transfer) and may, among other things, prohibit the import or export of any waste. Furthermore, the NMA can prohibit hazardous substances or impose procedures for import, export, safe storage, handling, transport, use and disposal. These procedures are part of a permit for hazardous substances. Staatsolie will have to register its storage, handling, and transport of hazardous substances and apply for a hazardous substance permit when regulations are promulgated. Furthermore, the NMA is authorized to require an emergency response plan for the storage, use, and transportation of contaminants, waste, or hazardous substances.
4. ***Environmental Audits*.** The EFA provides for the establishment of guidelines and procedures for conducting an audit. These Guidelines had not been prepared as of this writing.

It is currently unclear when the abovementioned implementation regulations of NMA will be approved so that the law can be implemented

NIMOS mining application procedure and EIA compliance

In anticipation of the adoption of the Environmental Framework Act, NIMOS published Guidelines for Environmental and Social Impact Assessment in 2005 and specific Guidelines the following years NIMOS has been administering the implementation of ESIAs since 2005.

Guidelines relevant to the Mining Sector are the following:

1. Environmental Impact Assessment (EIA) Guidelines Volume I: Generic Guidelines (2009)
2. Guidance Note (2017) (Supplement to the Generic Environmental Assessment Guidelines Volume 1)
3. Environmental Impact Assessment (EIA) Guidelines Volume II: Mining (2005)
4. Environmental Impact Assessment (EIA) Guidelines Volume IV: Social Impact Assessment (2005)
5. Offshore Oil and Gas Reconnaissance and Exploration Drilling Volume IX: Part 1 – (2020)

With the promulgation of the Environmental Framework Act in 2020, NIMOS will be transformed into the National Environmental Authority (NMA) and environmental social impact assessments becomes mandatory. Chapter 5 of the Environmental Framework Act contains provisions with regard to Environmental Impact Assessments. These are laid out in table 4.5 summarizing the articles of the Act:

Table 4.6 Provisions with regard to Environmental Impact Assessments

Articles
Article 22
1. Activities that may have adverse effects on the environment and for which the NMA is authorized to claim an Environmental Impact Assessment (EIA) are established by State Order. 2. The activities referred to in paragraph 1 of this Article may also include those activities which, in conjunction with other activities, may adversely affect the environment. 3. The NMA will establish regulations for all other activities for which an EIA is not required, but which can impact the environment.

Articles
4. The government body that grants authorization under the statutory regulation for engaging in activities as referred to in paragraphs 1 and 2 of this Article, shall, after receipt of the permit application, inform the NMA of this in writing, in order to determine the need to conduct an EIA. Notwithstanding the provision in the previous sentence, a copy of the aforementioned permit application is also sent to the NMA. 5. If an activity, as referred to in paragraphs 1 and 2 of this Article, requires an EIA, this activity shall commence after the Environmental Impact Report (EIR) detailing the results from the EIA, has been approved by the NMA.
Article 23
1. The determination as referred to in Article 22, paragraph 4, is subject to revision, if new facts and circumstances become known based on which it can reasonably be assumed that if these were known at the time of the decision-making, a different decision would have been made. 2. The conditions established by the NMA for the prevention, mitigation and monitoring of the adverse environmental impact of the activities, form part of the permit as referred to in Article 22, paragraph 4. 3. If no measures prove possible that can prevent the environment from being unacceptably impacted as a result of the activities to be undertaken, the NMA shall reject the activities.
Article 24
1. The NMA is notified of each proposed government policy plan or government program that can have an impact on the environment. 2. The NMA is authorized to conduct a Strategic Environmental Impact Assessment (EIA) or have such conducted, in relation to a proposed government policy plan or government program. 3. The criteria and procedures for the EIA are established by a State Order.
Article 25
By State Order are established: a) the criteria and procedures for determining whether a proposed activity whether or not from the government, or from the government policy plan or a government program, either by itself or in conjunction with other activities, has the tendency is to harm the environment adversely, which may require an EIA; b) the procedures for defining the framework within which the EIA will need to be conducted; c) the minimum requirements that an EIR must meet in order to be presented to the NMA; d) the qualifications, training, knowledge and experience to which persons charged with the implementation of an EIA must comply; e) the procedures for public participation in the EIA process; f) the criteria and procedures for evaluating the EIR by or on behalf of the NMA; g) the measures to prevent, mitigate, compensate and monitor the adverse effects of a proposed project or activity on the environment; h) the costs associated with the permit applicant in connection with the EIA process.

Source. Compiled by RINA, 2023

Despite the promulgation of the law, NIMOS has continued to work with the existing Guidelines, and they will continue to apply. NIMOS' Office of Environmental and Social Assessments is responsible for the implementation of ESIA processes in Suriname.

The Environmental Impact Assessment (EIA) and Environmental and Social Impact Assessment (ESIA) system are in place and implemented mostly by large scale mining activities. The EIA/ESIA process described by NIMOS is divided in 5 phases, namely:

1. Screening phase: This is the phase in the EIA process, in which NIMOS decides whether an Environmental Impact Assessment is needed or not. If yes, NIMOS will indicate the nature and extent of the analysis. NIMOS acknowledges three categories of EIA:
    a) Category A: an EIA is mandatory
    b) Category B, either:
        (i) An EIA is required (Category B, path 3);
        (ii) Another environmental document is needed (e.g., Environmental Management Plan) (Category B, path 2);
        (iii) No EIA is needed, but some environmental information is required before a decision can be taken (Category B, path 1).
    c) Category C: No EIA is required, but the project proponent will have to comply with the minimal guidelines.
2. Scoping phase: In this phase the Terms of Reference (ToR), sometimes also called Scoping report, for the EIA-study has to be prepared.
3. Assessment phase: In the assessment phase the EIA-study is to be carried out by a qualified consultant or consultancy firm by order of the project proponent.
4. Review phase: During the review process the submitted Environmental Impact Statement (EIS) is reviewed by NIMOS
5. Decision-making phase: After the EIS is reviewed, NIMOS should send the environmental advice regarding approval or denial of the project to the permitting agency. An overview of the whole EIA process is shown in figure 4.6 which presents the EA Flow Diagram.

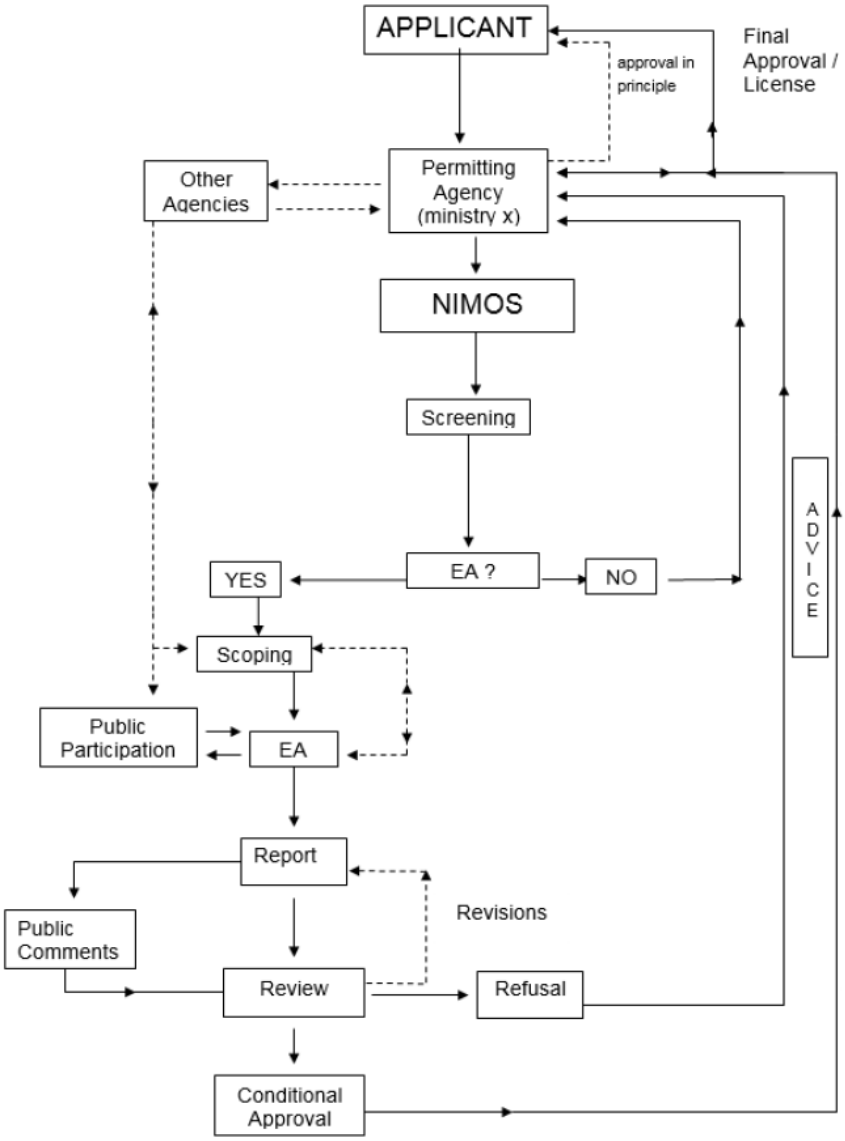


Figure 4.7: Environmental Assessment (EA) Flow Diagram

Source. NIMOS, 2023

Since the publication of the NIMOS Guidelines, the ESIA procedures are mainly followed by the multinationals in the mining sector (Bauxite, Gold, Hydrocarbons onshore and Offshore). The ESIAs are carried out on the basis of their own Companies policy or Mineral agreement with the Government that they have concluded. However, in practice it appears that the Ministry of NH/GMD has not yet included the requirement for an ESIA in their concession application procedure.

Currently, draft regulations to further implement the ESIA process have been prepared by NIMOS but have not been approved by the Government. These refer to The Draft State Order "Environmental Impact Assessment (MEA) Activities, Criteria and Procedures."

Amongst others, this State Order provides for a categorization of types of ESIAs to be performed for different development activities. The activities that may have adverse effects on the environment and

for which the NMA is authorized to require an ESIA include activities listed in a table. For the mining activities, table 4.6 presents the applied categorization.

Table 4.7 Categorization of ESIAs

Project type	Category A	Category B
Mining exploitation for metals	Exploitation above 10,000 hectares	Exploitation up to 10,000 hectares
Mining operation for non-metals (e.g., building materials)	Above 20 ha	Up to 20 ha
Mining exploration (excluding petroleum and natural gas)	---	All
Refineries (both new and expansion of existing facilities)	Oil Refineries	Other
Seismic projects for research purposes	---	All

Source. NIMOS, 2023

In the context of the transition to the NMA, a number of activities have been carried out that should lead to strengthening the institute so that the environmental framework law can be effectively enforced. An organizational structure with job descriptions has been prepared for NMA. An external group of experts also carried out an assessment of the current capacity of NIMOS and the required capacity of the NMA. Expert staff as well as administrative personnel will have to be recruited for the various offices. The government is currently looking for ways to implement this personnel reinforcement.

In addition to staff reinforcement, the NMA will also need adequate housing and equipment to carry out its enforcement tasks in a responsible manner. During an interview[45], no documents with exact numbers of required personnel and equipment were available. NIMOS has now moved to a temporary building, but the intention is that they will be housed in a new building. The government is seeking financial support from donor organizations, among other things, to strengthen the organization and prepare it for its enforcement task. Work has to be done on the ICT infrastructure to set up an online permitting system. An essential Office that needs to be strengthened in connection with supervision and enforcement is the Office of Environmental Monitoring and Enforcement. Work has already started on preparing a regulation on the structure, composition and working methods of the environmental inspectors. However, for the actual structure, a large number of staff will have to be recruited for enforcement nationwide. In addition, the organization must have the necessary equipment, transport and training in place.

After approval of the implementation regulations, the NMA will issue the following permits:

1. Environmental clearance based on the EIA process
2. An environmental permit for the release of contaminants into the environment
3. Permits for production, import &export, Storage, Handling and Use and removal of Hazardous Substance

[45] Interview with Donovan Bogor, Director Office of Environmental Planning & Information Management, NIMOS, dd 12 sept 2023.

4.3.3 Key findings on environmental protection and mitigation measures

In anticipation of adopting the Environmental Framework Act, NIMOS published Guidelines for Environmental and Social Impact Assessment in 2005 and specific Guidelines in the following years. Based on these guidelines, NIMOS has been administering the implementation of ESIAs since 2005. For the moment, NIMOS remains the institution responsible for environmental compliance. Nevertheless, NMA shall be the successor to the NIMOS, which will transition into the NMA, yet at the time of this study, the NMA is not yet operational and is expected to be established in the near future. Mitigation measures that are to be developed to reduce environmental impacts of the mining activities must be monitored by NMA/MNR to verify their effectiveness, and modified, in case of inefficiency.

The SESA study further showed that there is no national capacity to respond to accidents or other emergencies. Moreover, there are currently no discharge or emission standards in Suriname. Additionally, the GOS currently lacks structured and regulated waste and wastewater management system. The current regulatory framework does not require that mining companies include provisions in case of environmental or social damage and mining companies do not always have a post-closure plan, although many large companies have such a plan, although it is not required by law.

4.4 PROMOTE PUBLIC PARTICIPATION AND INFORMATION SHARING WHILE SAFEGUARDING CULTURAL AND SENSITIVE AREAS AND ENHANCING SOCIAL BENEFITS

4.4.1 Public consultation and FPIC requirements

There is currently no legislative basis for public consultations in Suriname in the context of project developments. Moreover, the national legal framework does not require the application of Free Prior and Informed Consent (FPIC) in consultations with Indigenous Peoples and Maroons. At the moment, the Environmental Framework Act is not fully operational because the implementation regulations to regulate Environmental Impact Assessment have not yet been formally approved. Therefore, it can be stated that Public Participation is currently not required by law.

Nonetheless, the Environmental Framework Act does refer to FPIC. It is stated in article 3 paragraph 1(m) that one of the tasks of the NMA is to ensure that the FPIC principle is applied in decision making processes that concern the living and residential areas of Indigenous and Tribal People. However, according to article 25€, the procedure for public participation needs to be established by State Order and has not yet been formally approved.

4.4.2 Open GIS information

GONINI is currently responsible for GIS information with its website available at www.gonini.org. Unfortunately, the maps and GIS information are outdated and have not yet been officialized. Moreover, GONINI does not offer open access to information, limiting the material to current information and data that is publicly available. More specifically, geological and territorial maps are outdated and lack information on mining locations, mining concessions, geological data and other mining related information that could be used towards sustainable mining development in Suriname. The GIS information does not always clearly indicate sensitive and protected areas; this information could contribute to avoiding conflicts especially in relation to protected areas, cultural resources and regarding the use of Indigenous land.

4.4.3 Social distribution of benefits

In many countries, the mining sector plays a significant role in economic development, generating substantial revenues and employment opportunities. However, mining activities can also have adverse social and environmental impacts on local communities. It is crucial to ensure that the benefits derived from mining are distributed fairly and equitably among the affected people. This requires the implementation of mechanisms for the social distribution of benefits and/or revenue sharing, aimed at addressing the socio-economic challenges faced by the affected communities. Such mechanisms are

designed to promote inclusive development, improve living standards, and enhance the overall well-being of the affected populations.

The social distribution of benefits in the mining sector involves a range of strategies and approaches that aim to maximize positive impacts and mitigate negative consequences. These mechanisms encompass various aspects, including revenue sharing, benefit sharing, employment opportunities, community development projects and funds, and stakeholder engagement. They are often implemented through a collaborative effort between governments, mining companies, civil society organizations, and affected communities.

4.4.3.1 Local Context

While explicit mechanisms for benefit sharing to affected people are not expressed in Suriname's legal and regulatory framework, certain legal provisions can indirectly address or touch upon the concept of social distribution of benefits. These regulations, although not specifically designed for this purpose, can still contribute to promoting equitable outcomes for affected communities.

- ✓ The **Constitution** proclaims that natural riches and resources are the property of the nation, and the state has the right to take possession of these natural resources to use them for the benefit of Suriname's economic, social and cultural development. The state must also create and improve the necessary conditions to protect nature and preserve the ecological balance. Furthermore, it is also stated that the law shall guarantee that the method in which trade and industry are conducted shall not be contrary to national objectives and the public interest, notably public order, health, morality and state security.
- ✓ The Mining Act states that mining should be carried out according to modern international techniques and methods and should be aligned with the norms tacitly assumed in the mining industry. Worker health and safety (and public health more generally) must be respected and protected by those operating in the industry, and they must follow norms for the protection of ecological systems. Mining companies must give priority to local employment and local purchasing of goods and services, when these can be obtained on comparable price, type, variety and quantity.
- ✓ The Mining Decree provides the basis for Mineral Agreements. Mining agreements are negotiated with the government and are promulgated as laws by the national assembly; modifications and extensions to these licenses are issued as legislative amendments. Agreements can be renegotiated with the consent of both parties. Table 4.7 presents the main mineral agreements.

Table 4.8 Mineral Agreements

Mineral Agreements
• **Brokopondo Agreement 1958B G.B.1985 no.4.** Agreement between the Government of Suriname and Suralco LLD concerning the development of hydropower potential.
• **Act Amendment Brokopondo Agreement S.B. 2019 no.96.** Provides for the purpose of its early termination of the agreement between the GOS and Suriname Aluminum Company LLC and to settle the consequences of that termination.
• **Newmont (Surgold) Mining Corporation Mineral Agreement.** The Mineral agreement between Surgold, a Subsidiary of Newmont Mining Corp. and the Ministry of Natural Resources of Suriname signed November 22, 2013, provides the terms of the agreement, the areas, the estimated resources and confirms that the Government of Suriname may hold a maximum share of 25% of the Suriname Mining Company.
• **Law on Merian Gold Project S.B. 2013 no.162.** Agreement between the Government of Suriname and Suriname Gold Company LLC for the exploration and exploitation of minerals.

• **Suriname Gold Mining Project: Mineral Agreement, Gross Rosebel (1994)**[46]**.** The agreement gave Golden Star the right to explore for gold on the Rosebel site, and to develop and operate mining operations there. As per the agreement, Golden Star is required to protect the health and safety of the general population, and to protect the natural environment, minimizing the negative impacts of operations on forest, land, water and wildlife. Obligations and rights around water use are included in the agreement. Yearly work plans and reports must be submitted to the government, reflecting operations, expenditures and production, among other things. Once exploration activities are completed, the operating company must restore—at its own expense—all affected areas as close to their original condition as can reasonably be expected. The operator must also give preference, to the maximum extent possible, to Surinamese employees and to products and services produced and offered in Suriname, provided these can be obtained at competitive terms and conditions. There are also provisions within the agreement that the company must work to minimize the dislocation of employees following the closing of the plant, through the development and implementation of an action plan. In addition, the mine operator cannot unduly disturb or interfere with the living conditions of Indigenous populations settled in the area, and all employees must respect their customs. If resettlement is required, it must be carried out with the utmost caution and consultation, at the operator's expense. There are extensive guidelines governing taxation, exemptions, payments, and royalties in the agreement.
• **Amendment 1: Gross Rosebel.** The agreement governing Rosebel gold mine was amended in 2003 following Cambior's purchase of Golden Star's stake in the company. Cambior, another Canadian company, had purchased 50 per cent of Golden Star's stake in 1994, and purchased the remaining 50 per cent in 2002 (Golden Star and Cambior had submitted the EIS together in 1997). A revised EIS was prepared and submitted in 2002 prior to the granting of a right of exploitation. Many of the provisions in the original agreement remained in place under the amended deal, though under the amended agreement, royalty rates were altered. An agreement was also reached on the transfer of Class A and B shares to the state upon commencement of commercial production.
• **Amendment 2: Gross Rosebel**[47]**.** A second amendment to the agreement governing Gross Rosebel was carried out in 2006 following IAMGOLD's acquisition of Cambior. Based on this agreement, the government assumed a 30 per cent undivided participating interest in the venture. IAMGOLD, interested in expanding gold production at the site, was also required to submit an ESIA for the expansion; this ESIA would have to be approved prior to the granting of exploitation rights. Some of the financial terms of the agreement were altered during the negotiations, namely the minimum spend obligation under the exploration right (USD 3 million), which was to be reduced by a proportional amount if the area under the permit was also reduced (i.e., a reduction in expenditure that is proportional to the reduction in the concession's size).

Source. Compiled by RINA, 2023

4.4.3.2 Existing Mechanisms for Social Distribution of Benefits

In developing countries, there is a growing expectation for mining projects to provide sustainable benefits to stakeholders either as a compensation for their land use, or as benefit or revenue sharing for local development and this, at the local, regional, and national levels. The rise in mineral prices, which leads to significant profits, has drawn increased attention to the importance of compensation payments and the need to maintain a "social license to operate." As a result, both governments and mining companies are exploring the possibility of utilizing foundations, trusts, and funds (FTFs) as mechanisms for distributing the advantages derived from mining operations to the surrounding communities. The following shows the current agreements in force.

[46] Gross Rosebel Agreement S.B. 1994 no. 22 as amended by S.B. 2002 no. 115

[47] LAW of May 6, 2013, containing permission to enter into an agreement to further amend and supplement the Minerals Agreement of April 7, 1994, with Grasshopper Aluminum Company N.V. and Cambior Inc. (S.B. 1994 No. 22, as amended by S.B. 2002 No. 115) S.B. 2013 No. 92)

- ✓ **ALCOA Agreement**[48]: It is stated in the agreement, the parties undertake to set up a development fund for the benefit of communities directly affected by the construction of the WKW[49] and the development of bauxite in the areas concerned. This fund is to be used for electricity, education and other community projects. The fund will be further regulated by parties by agreement.
- ✓ **Newmont (Surgold) Mining Corporation Mineral Agreement**[50:] In the agreement Surgold declared its intention as compensations, to establish a Community Development Fund (CDF) with the aim of financing projects aimed at the sustainable development of local communities. According to the agreement funding would be provided by Surgold on an annual basis during the operations. The Community Development Fund (CDF) – which is managed by a board that includes representatives from Newmont, the government of Suriname and the Pamaka community – supports sustainable development in the nine villages near the Merian mine[51]. Moreover, during the validation workshop, Newmont confirmed that it is currently paying USD 1.00 (one US dollar) per gram of gold to local communities as part of its revenue sharing program.
- ✓ I**ndigenous rights are included in the mining agreement with Rosebel**: specifically, employees must respect local Indigenous cultures and customs, and operations must not interfere with or disturb the living conditions of these communities. This is upheld by the Saramaka People judgment of the Inter-American Human Rights Court, which now falls under Suriname's international legal obligations. The judgment holds that large-scale mining and associated infrastructure projects (e.g., hydroelectric dams) must support Indigenous peoples' right to effective participation, including free, prior and informed consent (FPIC); that the project cannot deny these peoples the right to maintain their multiple relationships with their territory and to benefit from their traditional economy; and that the government cannot authorize mining or related activities in these territories until it has regularized their rights of ownership and control over the territory or received FPIC[52].

  There are provisions, both within the Mining Decree and the mineral agreement governing the Rosebel gold mine stipulating that operators give preference to the employment of Surinamese citizens at all levels of the organization, to the extent that such persons are available, qualified and suitable for such jobs. Under the Rosebel/Golden Star agreement, training must be provided to ensure the development of these skills, in their absence[53].
- ✓ **According to the Mining Decree**, priority must also be given to local purchasing of goods and services, provided they can be obtained on comparable price, type, variety and quantity. While this provision is included in the legislation, plans for ensuring local business development are not required as part of the permitting process.
- ✓ **The Ministry of Labour** holds the responsibility for safeguarding and enforcing occupational health and safety (OHS) standards. As part of the permit application process, applicants are required to submit accident prevention and emergency response plans. These plans are designed to prioritize the protection of both employees and communities, and they entail employee training and regular testing of procedures and protocols. It is noteworthy that large-scale mining companies adhere to international OHS standards.

Notwithstanding the existing agreements, communities visited are generally unsatisfied with the current agreements between the mining companies /government and the communities. In some communities,

[48] Note of Changes to Draft Transaction Agreements (2019)

[49] Water Kracht Werken – Hydropower Works

[50] Mineral Agreement between Republic of Suriname and Suriname Gold Company LLC Nov.2013

[51] Newmont, Sustainability highlights, Beyond the Mine, Suriname Operations, 2019

[52] Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2017). IGF Mining Policy Framework Assessment: Suriname. Winnipeg: IISD.

[53] Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2017). IGF Mining Policy Framework Assessment: Suriname. Winnipeg: IISD.

the people are also not satisfied with their leaders who have made arrangements with the mining companies without consulting the community while money received is not always managed properly or used for community development. Community members and authorities reiterated their need for capacity building not only on technical issues regarding mercury replacement, but also on the management of funds received from benefit and revenue sharing. Communities confirmed their needs for local infrastructure including roads, schools, health centers and basic services such as water, electricity and telecommunications. Moreover, they stressed the need for mining companies and governments to discuss and agree with the local communities on the priorities that can best benefit their communities.

4.4.3.3 Draft laws

The GOS elaborated a few draft laws and could support the distribution of benefits, as presented in table 4.8.

Table 4.9 Draft mining acts

Draft Mining Acts
Draft Mining Act[54]
The Draft Mining Act refers to the establishment of an Investment Fund for Community Lands (Gemeenschapsgronden). The set-up of the Community Lands Investment Fund is aimed at the development of the community lands and their inhabitants in the interior, as well as promoting sustainable developments in the mining industry. The fund's cash resources consist of: • payment by the State of a percentage to be determined by State Decree of the annual income obtained from royalties paid, obtained from mining licenses granted on community land. The percentage referred to may be changed by State Decree if the circumstances so require; • an annual contribution from the State budget; • interest on outstanding loans and investments; • other acquisitions, including gifts, donations, legacies and inheritances, whereby legacies are not accepted by the management other than under the privilege of inventory.
Draft "Collective Rights of Indigenous and Tribal Communities" Act[55]
The Draft Act states, among other things, that *"The collective rights of the Indigenous and tribal peoples relate to the effective and full experience of:* ***Benefit sharing*** *Indigenous and tribal peoples have the right to share fairly and equitably in the benefits of utilizing natural resources in their habitats."* The right of Indigenous and Tribal Peoples to benefit-sharing, defined as the right to share fairly and equitably in the benefits resulting from the utilization of natural resources in their habitats, is also a well-known principle of justice and included in, among others, the Biodiversity Convention (CBD). Although benefit sharing has been mentioned in the Draft act, it is not further regulated which can be considered as a weakness

Source. Compiled by RINA, 2023

[54] Concept Mijnbouwwet 2021 (Draft Mining Act 2021)

[55] *Draft Act Indigenous and Tribal Peoples (Traditional Living Areas) Collective Rights (Ontwerpwet Wet Collectieve Rechten Inheemse en Tribale Volken (traditionele woon-en leefgebieden))*

4.4.4 Key findings on public participation and information sharing

Public consultation is not compulsory in Suriname, and therefore there is limited information on new project to be implemented. This was confirmed with communities, particularly Indigenous and tribal people, who say they are not previously informed of mining projects and are faced with the situation after the fact. This generates conflicts that could be avoided with better access to information. Unfortunately, there is currently little exchange of information between GOS and stakeholders; the GOS holds much information that remains unpublished, and information is not updated, as shown on the GONINI website.

Moreover, there are few capacity-building programs available to inform and train miners on alternate mining methods, formalization of ASM, and other mining-related issues. Additionally, there are currently limited income-generating opportunities in mining for people living in mining communities where the priority of workers should be selected from the local community, yet *garimpeiros* often receive priorities. Employment in sectors other than mining is limited

The SESA study further showed that the international treaties and human rights declarations that Suriname has ratified and cosigned still have not resulted in the necessary legislation for the recognition, respect, and protection of the rights of Indigenous peoples, even despite the judgment by the Inter-American Human Rights Court in 2015 and many international reminders. This is not only a public participation issue but rather a legal one, for which a draft law has already been submitted to parliament for approval. Sensitive areas have been invaded by mining activities which are affecting the environment, biodiversity, and cultural heritage areas, and are threatening protected areas.

4.5 SUMMARY OF SESA KEY FINDINGS

Key findings of the SESA were organized into the four policy priorities to facilitate the implementation of the activities and the successful achievement of the strategic policy recommendations. The following presents the key findings that justify the formulation of the 25 recommendations of the SESA Action Plan.

Institutional capacity;

1. There is a lack of clearly defined roles and responsibilities for the monitoring of social and environmental impacts in the mining sector;
2. The institutional capacity assessment of MNR showed several sectors that need strengthening to ensure proper implementation of the regulatory framework;
3. The current NIMOS has a weak institutional capacity and needs urgent reinforcement to carry out its legal duties and responsibilities as NMA;
4. The GOS currently has insufficient resources to ensure the monitoring and evaluation of mining projects.

Legal and Regulatory Framework

5. The implementation of the SESA needs to be undertaken by the main authority responsible for the mining sector, the MNR;
6. The legal and regulatory framework lacks specificity, guidelines, and regulatory limits on discharge and emissions for mining activities. Clear standards and monitoring strategies are necessary to ensure its enforcement;
7. There is currently unrestricted use of mercury and other toxic substances used, particularly in the gold mining industry;
8. Mining contracts are not standardized and therefore lack transparency;
9. The new SCSD grievance mechanism needs to be socialized and implemented.
10. Many ASM workers are not formalized and are often operating illegally. The government has limited capacities and resources to address ASM's negative environmental and social impacts.

11. The international treaties and human rights declarations that Suriname has ratified and cosigned have still not resulted in the necessary legislation for the recognition, respect, and protection of the rights of Indigenous peoples, even despite the judgment by the Inter-American Human Rights Court in 2015 and many international reminders;

Environmental protection and mitigation measures

12. In anticipation of adopting the Environmental Framework Act, NIMOS published Guidelines for Environmental and Social Impact Assessment in 2005 and specific Guidelines in the following years. Based on these guidelines, NIMOS has been administering the implementation of ESIAs since 2005,
13. NMA shall be the successor to the NIMOS, which will transition into the NMA, yet at the time of this Action Plan, the NMA is not yet operational,
14. Mitigation measures must be monitored by NIMOS/NMA/MNR to verify their effectiveness and modify them in case of inefficiency,
15. There is no national capacity to respond to accidents or other emergencies,
16. There are currently no discharge or emission standards in Suriname. IFC recommends standards that are sometimes used,
17. The GOS currently lacks structured and regulated waste and wastewater management system;
18. The current regulatory framework does not require that mining companies include provisions in case of environmental or social damage;
19. Mining companies do not always have a post-closure plan;

Public participation and information sharing

20. Communities, particularly Indigenous and tribal people, say they are not previously informed of mining projects and are faced with the situation after the fact;
21. There is currently little exchange of information between GOS and stakeholders; the GOS holds much information that remains unpublished and not updated, as shown on the GONINI website;
22. There are few capacity-building programs available to inform and train miners on alternate mining methods, formalization of ASM, and other mining-related issues;
23. There are currently limited income-generating opportunities in mining for people living in mining communities where the priority of workers should be selected from the local community;
24. Sensitive areas have been invaded by mining activities affecting the environment, biodiversity, and cultural heritage areas, threatening protected areas.
25. Explicit mechanisms for benefit sharing to affected people are not expressed in Suriname's legal and regulatory framework. At the same time, communities claim they are not receiving any compensation for the mining activities in their territories.

5 SESA IMPLEMENTATION AND ACTION PLAN

5.1 SESA IMPLEMENTATION

The preparation of the Strategic Environmental and Social Assessment study allowed to identify the key environmental and social issues associated with the mining sector. Although the project is a technical assistance operation, the mining sector, and particularly the ASM sector, is sensitive and generates water contamination, damage to natural habitats and conflicts with land rights issues. In addition, the mining communities often become a breeding ground for sexual violence, gender-based violence and even child labor.

The Analysis of the effects of mining activities on the environment and communities shows that it addresses priority environmental and social issues. However, the efforts made are not sufficient to reduce the current levels of contamination and social problems in the mining regions. Negative environmental and social impacts are most likely to increase with the development of the mining sector, unless effective environmental and social management actions are adopted and implemented. This can be facilitated with the application of international best practices.

The need to balance development with the preservation of the physical and human environment remains a major challenge. When the environment or social issues are not taken into account in the national development plans, only a privileged part of the population can enjoy the expected social benefits, which leads to a lack of equity in the concept of economic growth. As part of the strategies to boost the economy in the mining sector, it is necessary to put in place basic services needed by disadvantaged populations and put an end to environmental degradation. It is also necessary to revise the regulatory framework, and above all, strengthen the capacity of government officials and other stakeholders in the mining sector to ensure the environmental and social sustainability of the mining reform and promote the country's development.

5.2 ACTION PLAN POLICY GOALS AND STRATEGIC RECOMMENDATIONS

The Action Plan presents a Policy Strategic Recommendations Matrix of the SESA, as derived from the analysis and evaluation of the information gathered during the SESA process, information presented in the key findings chapter of this report, and in the previously prepared reports attached in the Appendices. The Action Plan was designed to meet two main requirements:

- Present the recommendations identified from the findings around four strategic priority sectors which are: Sector 1. Strengthen institutional capacity towards better efficiency; Sector 2. Develop the legal and regulatory framework to create a conducive environment while providing guarantees to attract investment; Sector 3. Implement effective environmental protection and mitigation measures that promote sustainable management of resources and the environment; Sector 4. Promote public participation and information sharing while safeguarding cultural and sensitive areas and enhancing social benefits.
- Select effective actions and requirements for the SESA implementation.

The strategic recommendations and associated activities presented in this report and the Action Plan are the basis for the successful implementation of the SESA as defined by the objectives of the SESA.

The objectives of the SESA Action Plan are as follows:

- To specify priority sectors to be addressed in the reformed mining regulatory framework;
- To present a series of policy reform recommendations arising from key findings of the SESA;
- To summarize findings associated with the recommendation;
- To recommend the GOS Agency responsible for implementation;
- To suggest a priority timeline for implementation of the recommendations (short-term, Medium-term or Long-term);

- To propose preliminary actions to be taken to meet the recommendations, understanding that these are only preliminary actions, and that more activities will be defined during the implementation stage of the SESA;;
- To relate means of verification of the actions taken;
- To identify the indicators to be used for the monitoring of the actions;

5.2.1 Strategic recommendations

Based on the information and key findings from the SESA process, a series of strategic recommendations have been developed. The following shows the 25 proposed strategic recommendations.

1. Strengthen regulatory institutions, their legal frameworks, and enforcement mechanisms.
2. Strengthen day-to-day operations of MNR to ensure appropriate and efficient management.
3. Strengthen the institutional capacity of NIMOS.
4. Strengthen the monitoring and evaluation capacity of government agency personnel.
5. Confirm MNR as the SESA implementation agency.
6. Elaborate and implement the new Mining Act to remove ambiguities, vagueness, and ministerial discretion.
7. Phase out the use of toxic substances used in mining.
8. Standardize mining contracts with medium-scale and large-scale companies.
9. Support the application of the grievance redress mechanism to address concerns and complaints related to mining activities.
10. Formalize and mainstream ASM in the country's socioeconomic activities to mitigate risks from the informal economy and improve working conditions.
11. Strengthen regulations related to the EIA/ESIA processes.
12. Establish the National Environmental Agency (NMA) to facilitate environmental compliance.
13. Prioritize environmental protection with mitigation and monitoring measures.
14. Implement a comprehensive approach to mining accident prevention and response.
15. Establish clear discharge and emission limits.
16. Promote the circular economy model through the reuse and recycling of water and waste.
17. Establish environmental and social damage liability provisions for mining operations.
18. Implement well-planned mine closure and post-closure land use plans to restore environmental integrity and ensure the well-being of communities.
19. Recognize Indigenous and tribal peoples as a collective community and legal entity to safeguard their rights.
20. Improve public consultation, community, and stakeholder engagement.
21. Provide freedom of information with open access to geographic information and data of the mining sector.
22. Invest in capacity building and awareness-raising for mining companies and miners.
23. Create employment opportunities
24. Recognize sensitive, cultural heritage and protected areas as no-go areas for mining activities.

25. Promote transparency and accountability towards the social distribution of benefits.

For each of the strategic recommendations, a series of actions are suggested and can be found in the Annex F Action Plan.

5.3 ORGANIZATIONAL STRUCTURE OF THE ACTION PLAN

The Action Plan is presented as the Policy Matrix and includes policy, institutional and governance recommendations (short-term, medium-term and long-term), verifiable indicators as part of a monitoring program. The Action Plan for the SESA implementation and monitoring was validated during the visits to the various Indigenous communities and during the two days' workshop in Suriname during the months of July and august 2023 . Comments and suggestions collected during the validation process were taken into consideration for their inclusion in the final SESA report. All preoccupations and suggestions from community members and workshop participants have been included in the Action Plan. Details on the validation of the draft SESA report and Action Plan can be found in the Report of stakeholder validation of Draft SESA report and Action Plan with Indigenous and tribal communities and workshop participants in Appendix C5.

5.3.1 Organization of the Action Plan

The Action Plan is organized into four priority sectors for each identified Strategic Policy Recommendation:

- Sector 1. Strengthen institutional capacity towards better efficiency;
- Sector 2. Develop the legal and regulatory framework to create a conducive environment while providing guarantees to attract investment;
- Sector 3. Implement effective environmental protection and mitigation measures that promote sustainable management of resources and the environment;
- Sector 4. Promote public participation and information sharing while safeguarding cultural and sensitive areas and enhancing social benefits.

Each section presents the following information:

- **Strategic policy recommendation**: Presents a series of policy reform recommendations arising from key findings of the SESA;
- **Finding**: Presents a summary of the SESA key findings and forms the basis for the recommended actions;
- **Responsibility**: Identifies the GOS Agency responsible for implementation;
- **Priority timeframe for Base Scenario and for Accelerated Scenario**: Suggests a priority timeline for implementation of the recommendations Short-term (within 1 to 2 years), Medium-term (within 3 to 4 years), Long-term (within 5 to 7 years). These priorities define the ideal time span within which to follow up on the Action Plan, and therefore the implementation of the recommendations. The priority timeframe will depend on the selection of the scenario. In case the accelerated case scenario was applied, short-term priorities would remain short-term, medium-term priorities would become short-term priorities, and long-term priorities would become medium-term priorities. These activities are by no means representative of the total effort required, but show initial activities required to comply with the recommendation. The needs go way beyond the action Plan. Further activities and capacity building will be required and are to be identified during implementation of these initial activities;;
- **Actions to be taken**: Introduces a series of actions to be undertaken to implement the policy recommendation;

- **Means of verification**: Mentions the document where the action taken can be;
- **Monitoring Indicators**: Provides verifiable indicators to be used as part of a monitoring program. Additional indicators can be added by MNR according to need and specific areas of interest.

Additional section for Monitoring and mitigation of the SESA Action Plan follow-up

An additional section in the Action Plan was added as a tool for MNR to monitor the implementation of the SESA, information to be added by MNR during the implementation and follow-up of the SESA, which includes:

- **Date of action execution**: Date of execution of the proposed action;
- **Completion date**: Date of conclusion of the action;
- **Impact evaluation:** According to indicator, value to be used for continuous monitoring that will allow verification of changes over time;
- **Comment and suggestions for mitigation if required**: In case the values show the need for mitigation or indicate inefficiencies of the actions, this section allows for comments or recommendations to modify or include additional actions and capacity building, as required.

5.4 THE ACTION PLAN MATRIX

The Action Plan summarizes the Strategic Environmental and Social Assessment conducted during the study, and presents recommendations to support policy goals to: Strengthen institutional capacity towards better efficiency; Develop the legal and regulatory framework to create a conducive environment while providing guarantees to attract investment; Implement effective environmental protection and mitigation measures that promote sustainable management of resources and the environment; and Enhance social safeguards to promote public participation and enhance social benefits. The Action Plan is in Excel format as it is meant to be used as a strategic SESA implementation tool. The Action Plan is presented in Appendix F.

5.5 MONITORING THE IMPLEMENTATION OF THE ACTION PLAN

Monitoring the implementation of the Action Plan is necessary to ensure proper application of the SESA recommendations. As recommended by the European Strategic Environmental Assessment Directive[56], the GOS shall monitor the environmental effects of the implementation of the SESA, in order to identify, at an early stage, any unforeseen adverse effects associated with the actions, and to undertake appropriate remedial actions where needed.

The monitoring of the impacts of the strategic recommendations should include the following actions:

- Validate the activity being undertaken;
- Confirm the start and conclusion date of the activity;
- Verify that the strategic recommendation is achieving its objective based on the indicator;
- Identify negative impacts that may require remediation ;
- Comment on the results and propose alternative measures where required.

Monitoring of the SESA will provide information as to examine and analyze the implementation of the SESA and its recommendations and ensure that the mining reform strategy is successful with minimal negative impacts and maximum positive impacts benefiting the government, mining companies, mining workers and local communities.

[56] European SEA Directive 2001/42/EC

5.6 CAPACITY BUILDING PLAN AS A PRIORITY SECTOR

The strengthening of institutional capacity towards better efficiency is presented in the Action Plan as a Priority Sector. Four Strategic Policy recommendations were identified considering the SESA process of which the first aimed at strengthening the capacities of the GOS, based on the Institutional Capacity Assessment conducted. Details of the results of the capacity assessment can be found in Appendix D. The institutional capacity assessment clearly identified that institutional strengthening is required to improve overall management and specifically to facilitate the implementation of the proposed action plan. The strengthening of the institutional capacity should aim to:

- Strengthen regulatory institutions, their legal frameworks and enforcement mechanisms
- Strengthen day-to-day operations of MNR to ensure appropriate and efficient management
- Strengthen institutional capacity of NIMOS
- Strengthen the monitoring and evaluation capacity of government agency personnel

The detailed recommended actions for each of the institutional capacity building can be found in Tables 5.1 and 5.2.

5.7 PRIORITY TIMEFRAME FOR THE ACTION PLAN

In order to facilitate the implementation of the action plan, the recommendations presented in the plan were categorized according to their priority of implementation, based on the critical nature of the findings. The first category shows recommendations and associated actions that are considered as a priority and should be implemented in a short-term in order to acquire a regulatory and institutional framework that will support or facilitate the implementation of the other recommendations. The other categories include recommendations that should be adopted in the medium and long-term. It should be noted that the timeframe presented is based on the base case scenario. In case the accelerated case scenario was applied, short-term priorities would remain short-term, medium-term priorities would become short-term priorities, and long-term priorities would become medium-term priorities. Tables 5.1, 5.2 and 5.3 present the recommended actions according to their priorities, the first five being those that should be implemented immediately.

Table 5.1 ***Short-term priority action recommendations***

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
R1	Strengthen regulatory institutions, their legal frameworks, and enforcement mechanisms;	• Elaborate a detailed list of roles and responsibilities of institutional staff that clarifies project management, monitoring and evaluation. i.e., prepare an operations' manual • Hire and retain trained professionals (engineers, scientists, sociologists, consulting firm or other professional, to provide the required capacity building. • Capacitate personnel in formalization of ASM and community organization. • Develop and implement strict measures for better control of illegal imports of harmful substances for gold mining, especially mercury
R2	Strengthen day-to-day operations of MNR to ensure appropriate and efficient management;	• Capacitate government staff on the management and monitoring of the reformed mining sector regulatory framework. • Improve the Programming system of the MNR by including clear needs to be improved with monitoring, and follow up and reporting procedures • Improve the personal Management System with clear policies and procedures.

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		• Set-up a proper Goods and Services Management System. • Set-up an integrated Financial management System (for daily operations as well as for projects). • Develop an Internal Control Procedure. • Strengthen the capacity of MNR Capacity building towards the implementation of the SESA and sustainability of the procedures following the SESA • Prepare transitional procedures to avoid interruptions of activities in case of changes in government.
R3	Strengthen the institutional capacity of NIMOS;	• Develop a Programming system which includes Planning procedures, A Planning document (APO), as well as monitoring and follow up mechanisms • Develop an Administrative Organization System (OR and CR) for the NMA; • Formalize the Draft Policy Documents prepared for the operation of the NMA: Organizational Manual NMA, Management Regulations, NMA Salary Structure, HR Handbook; Update of Current Procurement Procedure (2013); • Set up a proper Goods and Services Management System; • Set up an integrated Financial Management System (for daily operations as well as for projects); • Develop and formalize a Code of conduct for the NMA; • Develop Internal Control Procedures; • Close the backlog in external audit control. • Strengthen the capacity of NIMOS towards the implementation of the SESA and sustainability of the procedures following the SESA • Ensure NIMOS personnel are well prepared for a smooth transition from NIMOS to NMA with appropriate and clear procedures.
R5	Confirm MNR as the SESA implementation agency;	• Register MNR as the responsible agency for the implementation of the SESA and its Action Plan, • Coordinate the implementation of the SESA with other government agencies • Organize capacity building to ensure a good understanding of the SESA for MNR staff. • Include the participation of an international Advisory Coordination team in the implementation phase of the SESA
R6	Approve and implement the new mining act to remove ambiguities, vagueness, and ministerial discretion;	• Include measures to ensure that mining operations meet environmental and social standards, present clear rules for rehabilitation of degraded areas, regulations regarding the informal gold sector and the mining concession issuance policy, taking into consideration international norms or standards, including social distribution to people affected by the Mining Sector. • Strengthen the regulatory compliance by ensuring that the new Mining Act aligns with global standards such as the Equator Principles, International Cyanide Management Code, the Minamata Convention on Mercury, and the World Bank Group's Environmental, Health, and Safety Guidelines

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		• Elaborate the new mining act implementation regulations to simultaneously approve the law and its implementation regulations. • Ensure the safeguard of displacement of local communities, child labor, and forced labor through community engagement, fair compensation, and labor rights enforcement drawing from IFC Performance Standards, ratified international conventions and good practices from neighboring countries. • Require the participation of government, mining companies and local communities as mandatory to negotiate compensation agreements. • Create the "Delfstoffen Instituut Suriname" (DIS) or Minerals Institute Suriname for the promotion, coordination, regulation, monitoring and inspection of the mining industry, according to the State Decree, and to strengthen the mining cadaster, geological data management and mining inspectorate functions. • Clarify legislation on land rights and land tenure for individuals, corporate entities and communities, and review all mining agreements. • Improve spatial planning to avoid conflicts by using mapping and other spatial instruments. • Require the inclusion of land users and landowners, local communities and apply FPIC principle where applicable to ensure participatory land use planning to ensure their participation in decision making that affect their lands and livelihoods, including issuance of mining leases, licensing and agreements. • Identify which concession rights have been issued and see what the options are for revoking them in the event of inactivity • Establish or strengthen an independent regulatory body with authority to monitor compliance, carry out inspections, and enforce penalties for non-compliance • Enforce laws and regulation by ensuring that mining operators comply with regulations enforcing actions in case of regulatory violations, organizing frequent inspections and assess potential civil or criminal penalties: mining permits should not be given to operators with outstanding violations. • Review, adapt and/or build on international best practices and international organizations such as World Bank and IDB operating standards and guidelines and best practice models in surrounding countries of Latin America while encouraging collaboration and information exchange between the GOS and LATAM countries on lessons learned.
R8	Standardize mining contracts with medium-scale and large-scale companies;	• Develop standard contracts for all mining companies to provide increased transparency. • Implement and monitor the updated mining application procedures for new and renewal of licenses. • Establish a fair royalty / tax based on the value and volume of the mineral extracted. • Include reasonable compensation for land and involuntary resettlement centered on the long-term livelihoods of the affected families, drawing on standards of international practice, considering clear and fair resettlement conditions when required according to local standards, or in its absence to IFC guidelines for mining.

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		• Implement best practices including consultation and seeking Free, Prior and Informed Consent (FPIC) from local communities, adopting biodiversity offsetting where feasible, restoring mined areas, and ensuring the equitable sharing of benefits. • Require a proper resettlement action plan for all mining projects that require resettlement.
R9	Support the application of the grievance redress mechanism to address concerns and complaints related to mining activities.	• Train mine inspectors in monitoring and evaluation • Establish specific Key Performance Indicators (KPIs) for impacts associated with mining activities (environmental, social, economic, etc.). • Conduct a baseline study analysis indicating environmental and social effects of the mining sector and use this information to develop the monitoring KPIs. • Monitor KPIs to verify the effectiveness of mitigation measures. • Establish and utilize KPIs for each impact and use them to evaluate and adjust the mitigation strategies accordingly.
R11	Recognize Indigenous and tribal peoples as a collective community and legal entity in order to safeguard their rights;	• Prioritize, expedite and grant the legal recognition of Indigenous peoples as a collective community and a legal entity as per the proposed Collective Rights Act submitted to Parliaments, in order to safeguard their fundamental rights, including land rights, traditional authority, Free, Prior and Informed Consent (FPIC), traditional knowledge, and other rights outlined in international frameworks like the UN Declaration on the Rights of Indigenous Peoples (UNDRIP). • Develop IP-specific instruments to ensure respect for the rights and lands of Indigenous and tribal populations to be used in all operations, drawing on the World Bank' ESS7 guidelines which is part of the World Bank's 2016 Environmental and Social Framework (ESF); these are similar to the WB IPPF and IPP, and should take into consideration the local krutu. • Apply the free, prior, and informed consultation (FPIC) process with the affected Indigenous Peoples' communities at each stage of the project, drawing on WB ESS 7 considering the Surinamese krutu procedure. • Include Indigenous resource protection in the mining projects. • Identify whether Indigenous Peoples are present in, or have collective attachment to, the project area drawing on WB ESS 7. • Ratify the ILO Convention 169 as suggested for years. • Require the preparation of an Indigenous Peoples Plan drawing on WB OP 4.10 and WB ESS7 for all mining projects • Require the obtention of a community's free, prior, and informed consent when engaging in projects affecting Indigenous and tribal lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources. • Implement measures to ensure just compensation to mitigate the "adverse environmental, economic, social, cultural or spiritual impact" • Facilitate capacity building workshops for Indigenous and tribal communities to enhance their ability to participate in decision-making processes related to mining activities and fund management.

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		• Consider the judgments of the International Court of Human Rights with rulings in favor of the rights of communities, specifically regarding the lack of respect of land tenure.
R12	Strengthen regulations related to the EIA / ESIA processes;	• Mandate comprehensive ESIAs for all mining projects and make their approval a precondition for mining permits, drawing on WB ESS1. • Prioritize monitoring and evaluation of EIA/ESIAs for large-scale and mechanized small-scale mines, focusing on the stakeholder priorities - water, sanitation, deforestation, and soil degradation • Prepare a land use zoning plan that could determine the regions where mining activity is allowed and define the territories where mining will not be allowed in order to avoid deforestation, as is currently the case in Suriname. • Require that communications of EIA/ESIAs be understandable by all stakeholders including local community representatives using accessible and comprehensible language. • Ensure that the EIAs/ESIAs clearly identify the legal obligations and commitments of the mining companies. • Require that EIA / ESIA studies include a public consultation report, FPIC and other protective measures against threats to Indigenous and tribal communities. • Implement clear EIA and ESIA regulations and procedures that include all phases of the mining cycle. • Detail the methodologies to be used for the assessment of impacts including deforestation, habitat loss, soil erosion, water pollution and community displacement. • Ensure forest management is included in the EIA/ESIA as drawing on WB ESS6.
R13	Establish the National Environmental Agency (NMA) to facilitate environmental compliance;	• Ensure a smooth transition from NIMOS to NMA with well-established transition procedures. • Prepare a technical and institutional structure for management and monitoring. • Establish a monitoring framework that provides clear roles for participation by local and national governments, civil society, and NGOs, implementing adequate training of staff for inspections and monitoring, and organizing regular monitoring visits to the mining sites. • Plan audits and independent review of mining operators. • Develop an auditing and compliance procedure to ensure conformance of the mining sector with the revised regulatory framework and guidelines. • Conduct evaluation and monitoring of cumulative impacts for all investments in the mining sector.
R20	Improve public consultation, community, and stakeholder engagement.	• Foster cooperation and partnerships between different government institutions, the private sector, and local communities through meetings and regular communications to ensure that all stakeholders are working together towards sustainable mining practices and the use of incentives and benefits.

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		• Ensure the participation of the displaced persons during the design and implementation of the project drawing on WB ESS5. • Ensure vulnerable groups are included in the consultation process. • Improve communication between stakeholders, governments and mining companies through continuous communication and information exchange.. • Require that consultation be undertaken by trained professionals in a culturally appropriate manner considering local customs, ethnic background, socioeconomic conditions, etc., by translating into local languages, presenting within the respective villages, among other strategies); stakeholders should be prepared for engagement. • Use a more proactive approach to consultation by sending direct invitations to stakeholders, building local relationships with community members, sharing information on the project, etc.). • Ensure multi-stakeholder participation in the decision making, monitoring and evaluation process of mining projects by inviting representatives from each group of stakeholders including government, mining corporations, local communities, and civil society.. • Require that mining companies prepare a consultation plan as part of their environmental and social management plan by adding this clause in the mining agreement. • Require tripartite consultations and negotiations for every stage of the mining project starting from exploration up to post-closure.
R21	Provide freedom of information with open access to geographic information and data of the mining sector;	• Establish or consolidate a centralized spatial information system. • Ensure GIS information is updated regularly with timely reports. • Monitor and coordinate the development of GIS database. • Enhance transparency and information sharing between institutions, mining companies, local communities and stakeholders with online internet platforms. • Ensure the use of spatial GIS information is included as part of the cadasters and mining licensing, and that maps are constructed in a participatory manner. • Organize more research and regular updates of GONINI's data allowing open access to the updated information to all.
R24	Recognize sensitive, cultural heritage and protected areas as no-go areas for mining activities.	• Establish clear procedures for the designation of protected areas • Preserve the local fauna and flora by not allowing mining projects on land considered sensitive areas or protected (no go zones). • Preserve animal husbandry and agricultural activities in mining areas • Organize participative mapping with Indigenous and tribal communities to clearly establish and agree on Indigenous and tribal territories, heritage and sacred territories, cultural and protected areas and other sensitive areas. • Protect cultural heritage building and areas • Include the respect the InterAmerican Human Rights Court when preparing legislation regarding protected areas.

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		• Establish and regulate a transparent decision-making process, including public participation for protected areas. • Include the respect of cultural heritage areas and traditions in the planning stage of a mining project • Assess the potential impacts on the likely physical cultural resources' issues identified that are likely to be affected by the project drawing on WB ESS8. • Develop a physical cultural resources management plan and address impacts on physical cultural resources in projects drawing on and WB ESS8. • Include considerations for biodiversity and ecological systems in all mining contracts, according to the National Biodiversity Strategy (NBS) and the various ratified conventions for the protection of biodiversity.

Source: RINA 2022

Table 5.2 *Medium-term action recommendations*

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
R4	Strengthen the monitoring and evaluation capacity of government agency personnel;	• Train mine inspectors in monitoring and evaluation • Establish specific Key Performance Indicators (KPIs) for impacts associated with mining activities (environmental, social, economic, etc.). • Conduct a baseline study analysis indicating environmental and social effects of the mining sector and use this information to develop the monitoring KPIs. • Monitor KPIs to verify the effectiveness of mitigation measures. • Establish and utilize KPIs for each impact and use them to evaluate and adjust the mitigation strategies accordingly.
R14	Prioritize environmental protection with mitigation and monitoring measures;	• Implement a monitoring system especially focusing on data collection regarding deforestation, soil degradation, water and air contamination are common environmental impacts across all three types of mining. • Ensure the mining project design includes appropriate safety measures for the tailings or a slimes dam, drawing on WB ESS4. • Regulate and enforce the Nature Conservation Act • Develop a national mining data portal that provides accessible and transparent information about mining activities, compliance, and impacts. • Draft, submit, adopt and promulgate the Spatial Planning Law • Require that mining projects include an environmental management plan (EMP) including the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels, drawing on Annex C. and WB ESS1. • Identify important natural habitat sites, the ecological functions they perform, the degree of threat to the sites, priorities for conservation, and associated recurrent-funding and capacity-building needs, drawing on WB ESS6

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		• Include views, roles, and rights of groups, from local nongovernmental organizations and local communities regarding their natural habitats, drawing on WB ESS6 through public consultations. • Strengthen environmental constituencies to promote united actions towards the protection and conservation of the environment • Ensure that cut trees and extracted wood from deforestation during land clearing for mining exploration and exploitation be used in a sustainable manner and never destroyed .
R15	Implement a comprehensive approach to mining accident prevention and response;	• Develop a sustainable environmental, social, health & safety (ESHS) strategy to be included in the legal framework to reduce or eliminate the adverse impacts of mining • Verify that all licenses include liability and safety contingencies (insurance, prevention and emergency response plans, occupational health and safety protocols, etc.). • Ensure that mining operations minimize negative environmental and social impacts through effective monitoring and enforcement of compliance with national legislation, drawing on IFC Performance Standards. IFC Environmental, Health and Safety Guidelines for Mining, Equator Principles and International Cyanide Management Code . • Develop guidelines for emergency response, risk reduction and disaster preparedness • Elaborate comprehensive legislation for blasting and underground mining, setting depth limitations to avoid seismic repercussions associated with detonation. • Draw on IFC Performance Standards and Environmental, Health and Safety Guidelines for Mining to ensure that the mining sector complies with updated and best practice policies and regulation and ensures occupational health and safety for its workers. • Identify clear boundaries/buffer zones for mining activities to ensure community health and safety.
R16	Establish clear discharge and emission limits;	• Establish and apply robust national and local discharge and emission standards with clear limits for water (surface water, ground water and marine), soil, subsoil and air, noise levels, which can draw on internationally recognized good practice standards and guidance, particularly the International Finance Corporation (IFC) 2012 Environmental and Social Performance Standards and the World Bank Group Environmental, Health and Safety (EHS) Guidelines, and comply with ratified international conventions such as Minamata." • Regulate the use of mercury especially for ASM operations as to reduce and eventually phase-out its use in accordance with the Minamata Convention ratified by Suriname and draw on UNEP's guidelines on mercury management. • Conduct a study of the extent of contamination from chemical contaminants such as mercury and cyanide, in waterways, fish and humans. • Monitor the presence of chemical contaminants in water, fish and humans • Clarify environmental requirements for every stage of mining operations.

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		• Implement environmental monitoring and enforcement of laws and regulations with penalties for non-compliance • Establish local monitoring committees to monitor mining impacts on the environment and the effectiveness of mitigation measures. • Ensure that the carbon-intensive nature of bauxite processing complies with the Paris Agreement, equator Principles and IFC/World Bank Performance standards.. • Provide incentives for green mining technologies. • Promote the use of green technologies in mining, such as cleaner production techniques and renewable energy.
R18	Establish environmental and social damage liability provisions for mining operations;	• Regulate liability and compensations for environmental and social damages resulting from mining activities or incidents • Require that the licensed company clearly established liability provisions and corrective measures in case of damage to the environment or local communities. • Verify that the corrective measures deliver the desired changes and not some other unwanted side effects.. • Incorporate the “polluter pays principle” as a guiding principle for environmental damages. • Outline specific sanctions and criminal responsibility to dissuade environmental and social violations. • Require that mining companies hold compulsory environmental liability insurance with minimum coverage. • Apply punitive damages to prevent malicious environmental contamination or gross negligence. • Determine and collect fines according to the level of damages and repeated violations. • Implement programs to protect against toxins, pesticides, herbicides, etc. regulating the use of pesticide used at the mining camps to ensure that it has negligeable adverse human health effect, that it is effective against the target species and as minimal effect on nontarget species and the natural environment, drawing on WB ESS3. • Require a water and waste management plan that protects surface and groundwater quality from deterioration, soil erosion and toxic discharge and neutralize mining waste, landscape restoration to protect topsoil and wildlife habitats at all stages of the mining operations: require native revegetation on and around mining sites.
R19	Implement well-planned mine closure and post-closure land use plans to restore environmental integrity and ensure the well-being of communities;	• Ensure mine companies present a mine-closure and post-closure plan as part of the compulsory measures with their mining permit applications. • Require mine closure and post-closure rehabilitation and land restauration for all mining concessions to ensure mined areas are restored and can contribute to local sustainable development.

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
R22	Invest in capacity building and awareness-raising for mining companies and miners;	• Provide training and support to mining companies, and local communities to help them understand and manage environmental and social risks. • Raise awareness of the importance of sustainable mining practices and the potential benefits for the country's long-term development through special campaigns and information channels. • Build capacity of mining companies through technical training, tools, and other support mechanisms to be developed and applied regarding mining methods, ASM formalization and other topics as required. (i.e., UNDP's EMSAGS project). • Strengthen the capacities of community leaders in negotiations with mining companies and governments, self-organization and fund management
R23	Create employment opportunities;	• Strengthen mining related institutions for training of mine workers with capacity building programs on identified weak sectors. • Promote youth employment and engagement in the mining sector • Ensure that mining companies offer in-house training or training at other institutions. • Verify the presence of provisions provided in both the Mining Decree and the mineral agreement with the mining company, confirms that operators give preference to the employment of Surinamese citizens at all levels of the organization, to the extent that such persons are available, qualified and suitable for such jobs. • Increase border control and enforce immigration regulations to control the migration of garimpeiros coming from Brazil, which will help improve community security and increase work opportunities. • Ensure the law on foreigners' work permit act is applied by including its terms and conditions in the mining licensing agreements as to reduce or eliminate the hiring of garimpeiros and other illegal miners • Promote the empowerment of women making their labor and social rights more visible and fostering gender neutral opportunities as to reduce the need for prostitution, reduce violence and improve living conditions. • Incentivize mining companies to purchase local goods and services when available (or a certain percentage of their goods requirements) and at comparable price, type, variety and quantity. • Promote mining activities as a development driver for local communities and governments prioritizing community members as workers and suppliers. • Promote economic diversification in sectors others than mining to reduce economic dependency on mining and ensure sustainability.
R25	Promote transparency and accountability towards the social distribution of benefits.	• Implement transparent tax collection with contractual obligations • Improve social accountability by making the mining policy process more transparent, especially related to Indigenous and tribal communities • Prepare a support action plan for local community development aimed at poverty reduction through the redistribution of income from mining to implement infrastructure projects and public services that benefit the local population and improve their quality of life.

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		• Develop guidelines for the fair and equitable distribution of mining benefits • Provide appropriate infrastructure or repair damaged existing infrastructure in accordance with mining development. • Prioritize in a more direct way the distribution of proceeds and revenues from mining activities to regions and communities that host or are involved in mining operations, identifying community development sectors, programs or needs that require support in consultation with community authorities and members. • Program regular monitoring and evaluation to assess the impact of the social distribution of benefits mechanisms and make necessary adjustments to address emerging challenges such as transparency and compliance with local governance. • Require that benefit sharing be part of the mining agreement, value to be calculated and written as a percentage of income or profit

Source: RINA 2022

Table 5.3 *Long-term action recommendations*

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
R7	Phase out the use of toxic substances used in mining;	• Promote research and introduce more environmentally friendly and clean production methods and technique for gold mining • Introduce a phase-out plan until full ban of import and use of harmful substances (i.e., mercury) for refining and mining activities as to comply with the Minamata Convention and the National Action Plan for the use of Mercury. • Offer Incentives for the import, sale and use of "clean" gold mining methods and techniques (e.g., low import duties, etc.)
R10	Formalize and mainstream ASM in the country's socioeconomic activities to mitigate risks from the informal economy and improve working conditions;	• Make available the information on the system for the identification of all ASM to know the number of people involved in these activities and to understand the social reality of this group of men and women involved in ASM. This will help identify the magnitude of the social and economic problems of ASM" • Develop policies, laws, regulations, standards and codes to promote a viable and sustainable ASM sector. • Offer incentives to promote the formalization of ASM and mitigate risks from the informal economy. • Support ASM workers with awareness and capacity building and training programs towards sustainable, more efficient extractive practices, formalization, community organization, access to finance, technical assistance, occupational health and safety measures, international certification, mercury replacement in the mining process, and other topics as required. • Require the payment of taxes in cases where the operation is artisanal, but exploits large volumes of material, as do medium and large-scale mines. • Encourage the adherence to international certification such as Fairmined and Fairtrade to create marketing opportunities for ASM which in turn will promote

No.	RECOMMENDATION OBJECTIVE	RECOMMENDED ACTIONS
		the formalization of the sector to improve working conditions, strengthen negotiation capacities and promote formal development and sustainability. • Allocate specific areas or mining zones for ASGM • Organize bilateral meetings between Brazil and Suriname to discuss a coherent migration plan to eliminate the uncontrolled entry of garimpeiros into Suriname's territory, as this issue has been identified as one of the key points to avoid mismanagement of ASM in the country." • Conduct a full business-type analysis to determine the required strategy for the mining sector.
R17	Promote the circular economy model through the reuse and recycling of water and waste.	• Develop a circular economy model through the use, reuse and recycling of water and waste from solid and liquid origin. • Develop strategies for water management, water use, water conservation, water recycling and water caption as ensure social concerns are addressed and environmental resources are protected such as water, drawing on WB . OP 4.07 and ESS6. • Draft, submit, adopt and promulgate the Waste Management Act

Source: RINA 2022

5.8 PRIORITY STEPS FOR SESA IMPLEMENTATION

The implementation of the SESA will require time and resources. As such, the following steps are recommended:

1) Confirm MNR as the responsible institution for the implementation of the SESA;
2) Train MNR personnel in the implementation procedures of the SESA;
3) Include other GOS agencies to work with MNR for the SESA implementation (NIMOS, ROM, Ministry of finance, others to be identified by MNR according to requirements;
4) Visit other countries to verify best practices that can be implemented in Suriname;
5) Create a database for SESA implementation follow-up and updating, under the responsibility of MNR as the implementing agency;
6) Implement an effective communication system within MNR, with other GOS agencies and stakeholders;
7) Draft the TORs for the implementation of the recommendations and the associated activities;
8) Elaborate a chronogram for carrying-out the activities.

6 REFERENCES

ACT (2010). *Participatory mapping in lands of Indigenous peoples and maroons in Suriname. Support for the sustainable development of the interior -collective rights. December 2010. Paramaribo.*

ACT. (2015, October 12). *Amazon Gold Rush: Gold Mining in Suriname - Map Journal*. (The Amazon Conservation Team (ACT)) Retrieved October 10, 2022, from The Amazon Conservation Team (ACT): https://www.amazonteam.org/maps/suriname-gold/

ACT. (2016). *Mapping the traditional lands of the Matawai Maroons in Suriname, one creek at a time.* Amazon Conservation Team (ACT). Retrieved October 05, 2022, from https://www.amazonteam.org/mapping-the-traditional-lands-of-the-matawai-maroons-in-suriname-one-creek-at-a-time/

AGC. (2014). *A practical guide: Using Retorts to Reduce Mercury Use, Emissions, and Exposures in Artisanal and Small-Scale Gold Mining.* Artisanal Gold Council (AGC). Retrieved October 05, 2022, from http://www.artisanalgold.org/wordpress/wp-content/uploads/2017/01/Retort_guide_Oct2014_lowQ_version1.0_Eng.pdf

Alcoa Government of Suriname (2028). Final drafts transaction documents between ALCOA and the Government of Suriname. Project Birch.

Alcoa. (2019). *Alcoa Sustainability Report.* Alcoa. Retrieved from https://www.alcoa.com/sustainability/en/pdf/2019-Sustainability-Report.pdf

ARM (2014). Alliance for Responsible Mining Foundation Fairmined Standard for Gold from Artisanal and Small-scale Mining, including Associated Precious Metals. Version 2.0, April 2014

Artisanal Gold Council. https://artisanalgold.org/south-america/.

Berrenstein, H. a.-S. (2016). *Republic of Suriname - Second National Communication to the United Nations Framework Convention on Climate Change 2008-2012.* Paramaribo: Office of the President of the Republic of Suriname.

BID. (2020). *SURINAME CONSOLIDATING A SUSTAINABLE ENERGY SECTOR (SU-L1055) LOAN PROPOSAL.* Interamerican Development Bank (BID). Retrieved from https://www.gtai.de/:PRO202001295028

BirdLife International. (2022, October 4). *Country profile: Suriname*. Retrieved from BirdLife International Data Zone: http://datazone.birdlife.org/country/suriname

BOSMA, W. e. (1984). AN EXPLANATION TO THE GEOWGY OF SURINAME. *Contributions to the Geology of Suriname 8*, pp. 31-82.

Buddingh', H. (2012). De geschiedenis van Suriname.

Canadian International Resources and Development Institute (CIRDI). (2016). Scoping study: Supporting technical training in extractives industries. Country: Suriname. Canadian International Resources and Development Institute: Vancouver.

CBS. (2022). *Country Profile - Suriname.* Central Bank of Suriname (CBS). Retrieved October 10, 2022, from https://www.cbvs.sr/images/content/statistieken/CP/SurinameCountryProfile.pdf

CCOHS. (2005). Occupational Vibration Exposure. *IOHA 2005 6th International Scientific Conference* (p. 84). Pilanesberg, South Africa: Canadian Centre for Occupational Health and Safety (CCOHS). Retrieved September 26, 2022, from https://www.ccohs.ca/events/ioha/vibration_ioha_2005.pdf

Central Bank of Suriname (CBS). (2022). Country Profile - Suriname. Retrieved October 10, 2022,

from https://www.cbvs.sr/images/content/statistieken/CP/SurinameCountryProfile.pdf.

Climate Action Tracker, https://climateactiontracker.org/countries/Suriname/ (Accessed: March 28th, 2023).

Colchester, M., Jean LR., and Kid J. (2002). Mining and Amerindians in Guyana. Final report of the APA/NSI project on 'Exploring Indigenous Perspective on Consultation and Engagement within the Mining Sector in Latin America and the Caribbean.' Ottawa, CA: The North-South Institute.

Cremers, L., Kolen, J., & de Theije, M. E. M. (Eds.). (2013). Small-scale Gold Mining in the Amazon. The cases of Bolivia, Brazil, Colombia, Peru and Suriname.

Dasgupta et all. (2007). *The Impact of Sea Level Rise on Developing Countries: A Comparative Analysis.* World Bank Group (WBG).

De Theije M., Seccatore J. (2016). Socio-technical study of small-scale gold mining in Suriname.

De Theije, M. (2009). 1st Report / Evaluation of NEMS 1. Unpublished consultancy report. Paramaribo, Suriname.

De Theije, M. Koles J., Heemskerk M., Duijves C., Sarmiento M., Urán A., Lozada I., Ayala H., Perea J., Mathis A. (2014) Engaging Legal Systems in Small-Scale Gold Mining Conflicts in Three South American Countries

De Theije, M., y M. Heemskerk (2011) Oro grande y pequeño en Surinam. La informalización y organización de la minería aurífera.

EITI. (2017). *Extractive Industries Transparency Initiative (EITI) Report of the Republic of Suriname for the Fiscal Year 2017.* Extractive Industries Transparency Initiative (EITI). Retrieved Sept 06, 2022, from Suriname 2017 EITI Report: https://eiti.org/documents/suriname-2017-eiti-report

EITI. (2019). *Suriname - Fact Sheet.* Extractive Industries Transparency Initiative (EITI) of Suriname. Retrieved Sept 06, 2022, from https://eitisuriname.org/wp-content/uploads/2019/04/seiti-factsheet-eng.pdf

EITI. (2019b). *EITI Suriname - History of Mining Industry*. Retrieved from EITI Suriname: https://eitisuriname.org/en/about-suriname/history-of-mining-industry/

EITI. (2022, Sept 06). *Extractive Industries Transparency Initiative (EITI)*. Retrieved Sept 06, 2022, from Suriname: https://eiti.org/countries/suriname

Equator Principles, "The Equator Principles – October 2020", https://equator-principles.com/wp-content/uploads/2020/05/The-Equator-Principles-July-2020-v2.pdf (Accessed: March 28th, 2023).

ERM. (2011). *SCOPING REPORT AND TERMS OF REFERENCE: Environmental and Social Impact Assessment Study of Surgold's Merian Project in Suriname.* Environmental Resources Management (ERM). Retrieved September 29, 2022, from https://s24.q4cdn.com/382246808/files/doc_downloads/operations_projects/south_america/documents/5-Merian_TOR-Final-Merian-ESIA-TOR_27Sept11.pdf

ERM. (2016). *DRAFT-Environmental Impact Assessment Addendum.* Retrieved September 29, 2022, from https://paperzz.com/doc/9382693/draft-environmental-impact-assessment-addendum

ERM. (2018). *Saramacca Satellite Mine Project: Environmental and Social Impact Assessment. Prepared for IAMGOLD Corporation by ERM Consultants Canada, Ltd.* Toronto, Ontario.

ESS. (2007). *Nationaal Biodiversiteit Actie Plan (NBAP).* Paramaribo, Suriname.

European Commission. (2021). *Multiannual Indicative Programme 2021-2027.* European Comission - International Partnerships. Retrieved Jan 17, 2022, from https://international-partnerships.ec.europa.eu/countries/suriname_en

European Union. (2019, 07 26). *EUR-Lex*. Retrieved September 26, 2022, from DIRECTIVE 2002/44/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:02002L0044-20190726

Fairtrade International. (rev. 2015). Fairtrade Standard for Gold and Associated Precious Metals for Artisanal and Small-Scale Mining, v.1.2, 2013.

FAO. (2020). *Suriname - Global Forest Resources Assessment 2020.* Rome: Food and Agricultural Organization (FAO). Retrieved 09 16, 2022, from https://www.fao.org/3/cb0068en/cb0068en.pdf

Fritz-Krockow Bernhard. 2009. Suriname: Toward Stability and Growth, International Monetary Fund (IMF).

GBS. (2022). *Data on Diseases, Immunisation data and other relevant health statistics, 2015-2021.* General Statistical Office (GBS). Retrieved from https://statistics-suriname.org/wp-content/uploads/2022/07/final-ODIN-5.1-5.2-Diseases-prevalence-Immunization-data-and-other-relevant-Health-statistics-2015-2021-EG.docx

GBS. (June 2022). *Environmental Statistics - Summary 2022.* General Bureau of Statistics of Suriname. Retrieved September 05, 2022, from https://statistics-suriname.org/wp-content/uploads/2022/06/ENVIRONMENT_ODIN_Indicators-EG-dd-300622.xlsx

GBS. (June 2022). Environmental Statistics - Summary 2022. General Bureau of Statistics of Suriname. Retrieved September 05, 2022, from https://statisticsuriname.org/wpcontent/uploads/2022/06/ENVIRONMENT_ODIN_Indicators-EG-dd-300622.xlsx

GBS. (March 2020). *9th Environment Statistics Publication.* General Bureau of Statistics of Suriname (GBS). Retrieved from https://statistics-suriname.org/wp-content/uploads/2021/03/Final-9th-environment-pub-2020.pdf

GEF. (2016). *Artisanal and Small-Scale Gold Mining (ASGM) National Action Plan (NAP) for Suriname*. Retrieved October 05, 2022, from Global Environmental Fund (GEF): https://www.thegef.org/projects-operations/projects/9489

GEF. (2017). *Artisanal and Small-Scale Gold Mining (ASGM) National Action Plan (NAP) for Suriname*. Retrieved October 05, 2022, from Global Environmental Fund (GEF): https://www.thegef.org/projects-operations/projects/9489

GEF-CReW. (2010). *Suriname*. (U.-C. R. Analysis, Producer, & GEF Caribbean Regional Fund for Waste Management (GEF CReW)) Retrieved October 05, 2020, from GEF CReW: https://www.gefcrew.org/index.php/participating-countries/suriname

GEMFAIR. Artisanal And Small-Scale Mining Standard, (2021).

GLiM. (2022). *University of Hamburg, Global Lithological Map*.

Global Environmental Facility, UNDP and Government of Suriname (GEF, UNDP, GOS). 2020. Suriname Minamata Initial Assessment Report.

Global Initiative against Transnational Organized Crime. 2016. Organized Crime and Illegally Mined Gold in Latin America.

GOMIAN. (2011). *Fact sheet Small scale gold mining in Suriname .* GOMIAN Small Scale Gold Mining in the Amazon. Retrieved September 26, 2022, from https://www.gomiam.org/wp-content/uploads/2014/11/factsheet-suriname.pdf

Görner, S. (2020). The mine-to-market value chain: A hidden gem. McKinsey. Article October 5, 2020. https://www.mckinsey.com/industries/metals-and-mining/our-insights/the-mine-to-market-value-chain-a-hidden-gem

GOS. (1986). Mining Decree E-58 of May 8, 1986, Containing General Rules for Exploration and

Exploitation of Minerals. E-58, Republic of Suriname, Paramaribo.

GOS. (2000). *THE CONSTITUTION OF THE REPUBLIC OF SURINAME (BULLETIN OF ACTS AND DECREES 1987 NO. 166).* Paramaribo: The Waterfront Press.

GOS. (2013). *National Biodiversity Action Plan (NBAP) 2012-2016.* Government of Suriname (GOS), Ministry of Labour, Technological Development and Environment . Paramaribo, Suriname: Republic of Suriname. Retrieved September 29, 2022, from https://www.fao.org/faolex/results/details/es/c/LEX-FAOC163417/

GOS. (2016). *Second National Communication to the United Nations Framework Convention on Climate Change.* PARAMARIBO, SURINAME: Office of the President of the Republic of Suriname. Retrieved August 30, 2022, from https://unfccc.int/documents/144630

GOS. (2017). *Policy Development Plan 2017 - 2021.* Paramaribo: Government of the Republic of Suriname. Retrieved September 29, 2022, from https://observatorioplanificacion.cepal.org/en/plans/policy-development-plan-2017-2021-suriname

GOS. (2018). *Macroeconomic outlook, investment and trade opportunities, September 2018.* Government of Suriname (GOS), Ministry of Fiance. Retrieved October 05, 2022, from https://statistics-suriname.org/wp-content/uploads/2021/05/Macroeconomic-outlook-investment-and-trade-opportunities-September-2018.pdf

GOS. (2019a). *National Inventory of Mercury Releases in Suriname 2019.* Republic of Suriname. Government of Suriname (GOS). Retrieved October 05, 2022, from https://suriname.un.org/sites/default/files/2020-10/Report%20L2Mercury-FNweb.pdf

GOS. (2019b). *NATIONALLY DETERMINED CONTRIBUTION OF THE REPUBLIC OF SURINAME 2020 - 2030.* Retrieved September 05, 2022, from https://unfccc.int/sites/default/files/NDC/2022-06/Suriname%20Second%20NDC.pdf

GOS. (2019c). *Suriname Decent Work Country Programme (DWCP) 2019 to 2021.* Government of Suriname (GOS) and International Labor Organization (ILO). International Labor Organization (ILO). Retrieved October 05, 2022, from https://www.ilo.org/wcmsp5/groups/public/---americas/---ro-lima/---sro-port_of_spain/documents/publication/wcms_727269.pdf

GOS. (2020). *Suriname Minamata Initial Assessment Report 2020.* Government of Suriname (GOS). Retrieved October 09, 2022, from https://suriname.un.org/en/download/51398/94234

GOS. (2020, June). *Suriname Minamata Initial Assessment Report 2020.* Ministry of Foreign Affairs, International Business and International Cooperation. Government of Suriname (GOS). Retrieved from https://hlpf.un.org/sites/default/files/vnrs/2022/VNR%202022%20Suriname%20Report.pdf

GOS. (2022b). *Gonini - Geographical Information System (GIS) layers*. Retrieved from Gonini - National Land Monitoring System of Suriname: https://www.gonini.org/

GOS. (2022c). *Surinam Multi-Year Development Plan 2022 - 2026.* Paramaribo, Suriname: Republic of Suriname. Retrieved from https://observatorioplanificacion.cepal.org/en/plans/multi-year-development-plan-2022-2026-suriname

Grassalco. (2022). *Grasshopper Gold - Maripaston Gold Mine*. Retrieved from https://grassalco.com/grasshopper-gold

GTR. (2015, March 09). *Suriname opens first gold refinery*. Retrieved October 9, 2022, from Global Trade Review (GTR): https://www.gtreview.com/news/americas/suriname-opens-first-gold-refinery/

Heemskerk M., Duijves, C., and Pinas M. (2014). Interpersonal and Institutional Distrust as Disabling Factors in Natural Resources Management: Small-Scale Gold Miners and the Government in Suriname, Society & Natural Resources: An International Journal

Heemskerk, M. and Olivieira M. (2004). Perceptions of small-scale gold mining impacts II. A survey in mining camps and affected communities in Suriname and French Guiana. WWF Guianas project

FG64. Paramaribo, Suriname. March 31, (2004)

Heemskerk, M., and Van der Kooye R. (2003). Challenges to sustainable small-scale mine development in Suriname.

https://publications.iadb.org/en/state-climate-report-suriname

Huber, O. (1995). Geographical and physical features. In M. B. Garden. Portland, USA: Timber Press.

IADB. (2021). *State of the Climate Report: Suriname.* Inter-American Development Bank (IADB), Climate Change Division. Inter-American Development Bank (IADB). Retrieved August 30, 2022, from https://publications.iadb.org/en/state-climate-report-suriname

IAMGOLD. (2022). *Rosebel Gold Mine, Suriname*. Retrieved October 09, 2022, from IAMGOLD OPERATIONS: https://www.iamgold.com/English/operations/rosebel/default.aspx

IBAT. (2022). *Integrated Biodiversity Assessment Tool (IBAT)*. Retrieved August 31, 2022, from https://www.ibat-alliance.org

IBAT. (2022, 10 4). *Suriname*. Retrieved June 21, 2023, from Integrated Biodiversity Assessment Tool (IBAT): https://www.ibat-alliance.org/country_profiles/SUR

IBRD International Bank for Reconstruction and Development. (2019). Project appraisal document on a proposed loan in the amount of us$23 million to the republic of Suriname for a competitiveness and sector diversification project. WBG – IBRD.

IBRD. (2019). P*roject appraisal document on a proposed loan in the amount of us$23 million to the republic of Suriname for a competitiveness and sector diversification project.* World Bank Group - International Bank for Reconstruction and Development (IBRD).

IFC - International Finance Corporation. (2007). *Environmental, Health and Safety Guidelines for Mining.*

IGF Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). (2017) Global Trends in Artisanal and Small-Scale Mining (ASM): A review of key numbers and issues. Winnipeg: IISD.

IGF Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development. 2017. Mining Policy Framework Assessment: Suriname. Winnipeg: IISD.

ILACO. (2019). *Environmental and Social Impact Assessment (ESIA) of Energy Infrastructure Projects.* Retrieved September 29, 2022, from https://ewsdata.rightsindevelopment.org/files/documents/55/IADB-SU-L1055_wnAREte.pdf

ILO. (2019). *Rules of the Game: An introduction to the standards-related work of the International Labour Organization.* International Labour Organization (ILO). Retrieved October 05, 2022, from https://www.ilo.org/global/standards/information-resources-and-publications/publications/WCMS_672549/lang--en/index.htm

ILO. (2022). *International Labor Organization (ILO)*. Retrieved October 03, 2022, from Suriname Ratifications: https://www.ilo.org/dyn/normlex/es/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:103287

IGF (IGF). (2017). Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development *Guidance for Governments: Managing artisanal and small-scale mining*. Winnipeg: IISD.

IGF (2017). Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development Global Trends in Artisanal and Small-Scale Mining (ASM): A review of key numbers and issues. Winnipeg: IISD.

International Labor Organization (ILO). 2021. Suriname Decent Work Country Programme 2019 –

2021.

IPCC, “Climate Change 2013: The Physical Science Basis”, http://ipcc.ch/report/ar5/wg1/ (Accessed: March 28th, 2023).

IPCC. (2019). Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories”, https://www.ipcc.ch/report/2019-refinement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/ (Accessed: March 27th, 2023).

ITA. (2022, Aug 06). *Suriname - Country Commercial Guide. Mining and Minerals*. Retrieved Sept 06, 2022, from International Trade Administration (ITA): https://www.trade.gov/country-commercial-guides/suriname-mining-and-minerals.

Jodensavanne Foundation. (2022). *Our Gallery*. Retrieved from odensavanne Foundation: https://www.jodensavanne.org/gallery

Joshi, A. (2015, October 30). *Gold mining explodes in Suriname, puts forests and people at risk*. Retrieved from Mongabay News: https://news.mongabay.com/2015/10/gold-mining-explodes-in-suriname-puts-forests-and-people-at-risk/.

Kambel, E.R. (2009). Mijnbouw, infrastructuur en de rechten van inheemse en tribale volkeren in Zuid- Oost Suriname. Report produced for the Vereniging van Inheemse Dorpshoofden in Suriname (VIDS)

Kautzor, T. (2014a). *The Railways of Suriname: Plantation Railways.* Retrieved October 05, 2022, from https://www.internationalsteam.co.uk/trains/surinam04.htm

Kautzor, T. (2014b). *The Railways of Suriname, Suriname Landspoorweg.* Retrieved October 05, 2022, from https://www.internationalsteam.co.uk/trains/surinam02.htm.

KOPI. (2022). *Kennis, Onderzoek, Planning, and Informatie (KOPI)*. Retrieved August 30, 2022, from Foundation for Forest Management and Production Control (SBB) and National Forest Monitoring System (NFMS): https://kopi.sbb.sr/index.php?r=deforestationinformation%2Findex

Larson Davis. (2022a). *Larson Davis*. (Larson Davis) Retrieved September 26, 2022, from Hand-Arm Vibration Syndrome: http://www.larsondavis.com/applications/human-vibration-exposure/hand-arm-vibration-syndrome

Larson Davis. (2022b). *Larson Davis*. (Larson Davis) Retrieved September 26, 2022, from Whole-Body Human Vibration Exposure: http://www.larsondavis.com/applications/human-vibration-exposure/whole-body-vibration

LUJAN, N. K., & ARMBRUSTER, J. (2011). The Guiana Shield. In J. S. (Eds.), & J. S. REIS (Ed.), *Historical Biogeography of Neotropical Freshwater Fishes.* (1st ed., pp. pp. 211-224). California, USA: University of California Press. Retrieved Sept 01, 2022, from http://www.jstor.org/stable/10.1525/j.ctt1pp29c.17

Lyons & Espinosa. (2022, September 14). *Can Two New Bills Reshape Indigenous Rights and Illegal Gold Mining in Suriname?* Retrieved September 09, 2022, from Mongaby: https://news.mongabay.com/2022/09/can-two-new-bills-reshape-Indigenous-rights-and-illegal-gold-mining-in-suriname/

MAS. (2020). *National Report Suriname 2021 - 22nd Meso-American-Caribbean Sea Hydrographic Commission Meeting.* Paramaribo: Maritime Authority Suriname (MAS). Retrieved from https://iho.int/uploads/user/Inter-Regional%20Coordination/RHC/MACHC/MACHC22/MACHC22_2021_03.11_EN_National.Report_Suriname_v1.pdf

MBG. (2022, 10 4). *Tropicos.org. Missouri Botanical Garden*. Retrieved from https://tropicos.org

MNR. (2019). *Note on Minerals Institute Suriname.* Ministry of Natural Resources (MONR) of Suriname, Republic of Suriname. Retrieved Sept 05, 2022, from

https://documents1.worldbank.org/curated/zh/715551576654339922/Note-on-Minerals-Institute-Suriname.docx

MNR. (2022a). *Ministry of Natural Resources*. Retrieved September 29, 2022, from About us: https://gov.sr/ministeries/ministerie-van-natuurlijke-hulpbronnen/over-ons/

MNR. (2022b, March 09). *Ministry of Natural Resources*. (Republiek Suriname) Retrieved Sept 06, 2022, from Officiële doorstart Suriname competitive and sector diversification project; duurzame ontwikkeling mijnbouwsector, naar delfstoffen instituut: https://gov.sr/officiele-doorstart-suriname-competitive-and-sector-diversification-project-duurzame-ontwikkeling-mijnbouwsector-naar-delfstoffen-instituut/

MNRE. (1984). *Mededeling Geologisch Mijnbouwkundige Dienst van Suriname Mededeling 27-1984, Contributions to the Geology of Suriname 8.* Ministry of Natural Resources and Energy of Suriname (MNRE).

Mohadin, K. (1993). Conservation of freshwater ecosystems in Suriname. In P. Ouboter, *MONOGRAPHIAE BIOLOGICAE. Volume 70. The Freshwater Ecosystems of Suriname* (pp. 275-284). Kluwer Academic Publishers.

Monsels, D. (2016). Bauxitedeposits in Suriname: Geological context and resource development. *Netherlands Journal of Geosciences — Geologie en Mijnbouw, 95*(4), 405–418. doi:10.1017/njg.2015.28

Newmont. (2019). *2019 SUSTAINABILITY HIGHLIGHTS - Beyond the Mine - Newmont Suriname Operations.* Retrieved from https://www.newmont.com/operations-and-projects/global-presence/south-america/merian-suriname/default.aspx

Newmont. (2020). *Merian 2019 Economic Impact Report.* Newmont and Steward Redqueen. Retrieved from https://s24.q4cdn.com/382246808/files/document_library/economic_impact_reports/Suriname-Merian-2019-Economic-Impact-Report_National-Level.pdf

NIMOS. (2022). Retrieved from THE APPROVAL PROCESS OF THE ENVIRONMENTAL FRAMEWORK ACT: https://nimos.org/en/portfolio/revise-approve-env-frmwk-act/

NIMOS. (2022a). *NAP Project*. Retrieved October 10, 2022, from National Institute for Environment and Development in Suriname (NIMOS): http://nimos.org/en/nap/

NIMOS. (2022b). *National Institute for Environment and Development in Suriname (NIMOS)*. Retrieved September 29, 2022, from About Us: http://nimos.org/en/about-us/

NIMOS. (2014). Activities Matrix Mercury Free Environment. Strategy matrix Policy document & Roadmap for Implementation of Minamata Convention. Policy report. Nationaal Instituut voor Milieu en Ontwikkeling Suriname, Paramaribo, Suriname.

OCHA. (2022). *Suriname: Country Profile (as of May 2022)*. Retrieved from UN Office for the Coordination of Humanitarian Affairs (OCHA): https://reliefweb.int/report/suriname/suriname-country-profile-may-2022

Ouboter, et al. (2018, May 17). Mercury Levels in Women and Children from Interior Villages in Suriname, South America. *International Journal of Environmental Research and Public Health, 15*(5), 1007. doi:https://doi.org/10.3390%2Fijerph15051007

Ouboter, P. ((2002, February). *Directory of protected areas of Suriname.* Conservation International Suriname, Paramaribo. Retrieved September 02, 2022, from https://www.researchgate.net/publication/262972705_Directory_of_protected_areas_of_Suriname

Passos, C. J. S. and D. Mergler. (2008). Human mercury exposure and adverse health effects in the Amazon: a review. Cadernos Saúde Pública 24 (4). Online journal. Retrieved from http://dx.doi.org/10.1590/S0102-311X2008001600004.

Peplow, D., and Augustine, S. .2007. Community-led assessment of risk from exposure to mercury by native Amerindian Wayana in southeast Suriname.

Pitou van Dijck. (2001). Suriname: The Economy--Prospects for Sustainable Development Paperback.

Government of Suriname (2019). National REDD+ Strategy of Suriname. Paramaribo, Suriname.

RG. (2022). *IAMGOLD ROSEBEL GOLD MINES*. Retrieved from IAMGOLD ROSEBEL GOLD MINES N.V.: https://www.rosebelgoldmines.sr/

Rostain, S. (2008). *The Archaeology of the Guianas: An Overview. .* (e. H. Silverman and W. Isbell, Ed.) Springer, New York: In Handbook of South American Archaeology. .

Rostain, S. (2010). *Pre-Columbian Earthworks in Coastal Amazonia. Diversity 2010 (2), pg. 331-352.*

SBB, B. C. (2019). *GCCA+ Suriname Adaptation Project. Setting up a mangrove biodiversity Monitoring System. Final Report .* Paramaribo, Suriname: SBB.

SBB. (2022, October 4). *Post- Deforestation Land Use Land Cover (LULC) information*. Retrieved from KOPI - Statistical data of the National Forest Monitoring System (NFMS): https://kopi.sbb.sr/index.php?r=deforestationlanduselandcover2%2Findex

SEARCH. (2022). *Suriname Cultural Heritage Scoping Report.* SEARCH Inc.

Seccatore, J and de Theije Marjo. 2016. Socio-technical study of small-scale gold mining in Suriname.

SITA. (2022). *Natural Resources*. Retrieved from Suriname Investment and Trade Agency (SITA): https://sita.sr/sectors/natural-resources/

SLMS. (2022, 10 4). *GONONI - National Land Monitoring System of Suriname*. Retrieved from https://www.gonini.org/

SS. (2017). *Socio-economic, health and environmental impacts of mining in Suriname, with a focus on Artisanal and Small-scale gold Mining.* Produced by Social Solution (SS) for United Nations Development Program (UNDP) and Global Environmental Facility (GEF).

Staatsolie Maatschappij Suriname N.V., 2022 (2022, December 30). Staatsolie Exceeds Production Targets. *Press Release*, p. 4.

Suriname - Country Commercial Guide. 2022. Retrieved from https://www.trade.gov/country-commercial-guides/suriname-market-overview.

Swiss Better Gold. https://ororesponsable.org/

SWM. (2019). *Environmental and Social Analysis Water Supply Modernization Program SU-L1058.* Suriname Water Supply Company (SWM). Retrieved from https://www.swm.sr/wp-content/uploads/2019/11/Fit-for-Disclosure-ESA-SU-L1058-1.pdf

SWRIS, S. W. (2008, September). *Suriname Water Resources Information System - SWRIS*. Retrieved from Geology: Suriname's Geology and Mineral Deposits: https://www.swris.sr/wp-content/uploads/2018/05/geology.pdf

SWRIS. (2022). *Suriname Water Resources Information System (SWRIS)*. Retrieved August 26, 2022, from Suriname Data - General: https://www.swris.sr/data/general/

TCFD, "Recommendations of the Task Force on Climate-related Financial Disclosures," https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf (Accessed: March27th, 2023).

Telmer K. and Veiga M. (2009). World emissions of mercury from artisanal and small-scale gold mining, Mercury Fate and Transport in the Global Atmosphere.

Terra-i. (2014, 09 08). *Terra-i*. Retrieved 09 16, 2022, from SURINAME, A FOREST WEALTH COUNTRY AFFECTED BY AN ENVIRONMENTAL ISSUE: http://www.terra-i.org/news/news/Suriname--a-forest-wealth-country-affected-by-an-environmental-issue.html

ThinkHazard!,, https://thinkhazard.org/en/ (Accessed: March 27th,2023).

TMP. (2022). *About us - Moengo Port History*. Retrieved from Traymore Moengo Port (TMP): https://traymorenv.com/en/about-us/moengo-port-history

UN. (2022). *General Assembly - Mercury, small-scale gold mining and human rights - Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes, Marcos OrellanA/HRC/51/35.* United Nations (UN) General Assembly. Retrieved October 07, 2022

UNDP. United Nations Development Programme. (2019). Program "Effectively managing gold mining in Suriname." Retrieved from https://www.undp.org/suriname/news/effectively-managing-gold-mining-suriname

UNDP. (2019, July 30). *INDC Project Actions and Impacts: Suriname*. Retrieved October 05, 2022, from UNDP Climate Promise: https://climatepromise.undp.org/research-and-reports/indc-project-actions-and-impacts-suriname

UNDP. (2022). *Midterm Review, Improving Environmental Management in the Mining Sector of Suriname, with Emphasis on Artisanal and Small-Scale Gold Mining (ASGM.* United Nations Development Program (UNDP). Retrieved Jan 17, 2022, from https://erc.undp.org/evaluation/documents/download/19813

UNEP. (2022). *Environmental Framework Act (No. 97 of 2020).* FAO, FAOLEX. Retrieved September 29, 2022, from https://leap.unep.org/countries/sr/national-legislation/environmental-framework-act-no-97-2020

UNESCO. (2002). *Nomination of the Historic Inner City of Paramaribo for the World Heritage List of UNESCO.* Retrieved October 05, 2022, from https://whc.unesco.org/en/list/940.

UNESCO. (2022a). *Historic Inner City of Paramaribo: Photograph Gallery.* . Retrieved October 05, 2022, from UNESCO: https://whc.unesco.org/en/list/940/gallery/. Accessed on October 5, 2022.

UNESCO. (2022b). *The settlement of Joden Savanne and Cassipora cemetery. Tentative World Heritage List.* Retrieved October 05, 2022, from https://whc.unesco.org/en/tentativelists/1083/

UNFCCC, Update letter June (2022), https://unfccc.int/sites/default/files/NDC/2022-06/NDC%202022%20Update%20Letter%20to%20UNFCCC.pdf (Accessed: September 19th, 2022).

United Nations Industrial Development Organization (UNIDO). (2017). Final NAP ASGM PRODOC.

USGS. (1999). Geologic Provinces of South America 1999. *Schenk, C.J, Viger, R.J., and Anderson, C.P., 1999, Maps showing geology, oil and gas fields and geologic provinces of the South America region: U.S. Geological Survey Open-File Report 97-470-D, 12 p.* Retrieved August 30, 2022, from https://services3.arcgis.com/6ivv17yGXadPbqNc/arcgis/rest/services/Geologic%20Provinces%20of%20South%20America%201999/FeatureServer

Veiga, M. (1997). Artisanal Mining Activities in Suriname – UNIDO.

Versteeg, A. H. (2003). *Suriname Before Columbus. Libri Musei Surinamensis 1. Stitching Surinaams Museum, Paramaribo.* .

Versteeg, A. H. (2008). *"Barrancoid and Arauquinoid Mound Builders in Coastal Suriname."* (e. H. Silverman and W. Isbell, Ed.) Springer, New York.: In Handbook of South American Archaeology. .

VIDS. (2020). . *Baseline Report of the situation of the Indigenous people in Suriname 2020. Available at:.* Association of Indigenous Village Leaders in Suriname (VIDS). Retrieved from https://Indigenousnavigator.org/files/media/document/BaselineReport_ENG_final_10May2021.pdf

Vletter, R. d. (1984). SYNTHESIS OF THE PRECAMBRIAN OF SURINAME AND REVIEW OF SOME OUTSTANDING PROBLEMS. *CONTRIBUTIONS TO THE GEOLOGY OF SURINAME 8*, pp. 11-30.

Walle, M. and Jennings, N., 2001. Safety and Health in Small-Scale Surface Mines: A Handbook. International Labour Organization, Geneva, Switzerland.

WBG. (2018). World Bank Environmental and Social Framework. World Bank, Washington, DC. https://thedocs.worldbank.org/en/doc/837721522762050108-0290022018/original/ESFFramework.pdf

WBG. (2017). *Oil, Gas and Mining: A sourcebook for understanding the extractive industries.* World Bank Group (WBG).

WBG. (2017). *Suriname Sector Competitiveness Analysis: Identifying Opportunities and Constraints to Investment and Diversification in the Agribusiness and Extractives Sectors.* Washington, USA.: World Bank Group (WBG). Retrieved 09 16, 2022, from https://openknowledge.worldbank.org/handle/10986/26205

WBG. (2017)_. Doing Business Economy Profile 2017: Suriname.

WBG. (2019). Forest-Smart Mining: Large-Scale Mining on Forests (LSM).

WBG. (2019). State of the Artisanal and Small-Scale Mining Sector. Washington, D.C.: World Bank.

WBG. (2021) Developing Forest-Smart Artisanal and Small-Scale Mining (ASM) Standards.

WBG. (2022). Climate Change Knowledge Portal, https://climateknowledgeportal.worldbank.org.

WBG. (2022). *World Bank Group (WBG) Climate Change Knowledge Portal For Development Practitioners and Policy Makers*. Retrieved August 30, 2022, from Suriname - Climatology: https://climateknowledgeportal.worldbank.org/country/suriname/climate-data-historical#:~:text=Suriname's%20geographical%20location%20just%202,C%2C%20in%20the%20southern%20regions.

WBG. (2022a). *Overview*. (World Bank Group (WBG)) Retrieved October 13, 2022, from The World Bank In Suriname: https://www.worldbank.org/en/country/suriname/overview#1

WBG. (April 2015). *INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT INTERNATIONAL FINANCE CORPORATION AND MULTILATERAL INVESTMENT AGENCY COUNTRY PARTNERSHIP STRATEGY FOR SURINAME FOR THE PERIOD FY15-FY19.* World Bank Group (WBG). Retrieved October 04, 2022, from http://documents1.worldbank.org/curated/en/753311468311980671/pdf/91238-REPLACEMENT-FILE-Box391426B-PUBLIC-disclosed-4-29-15.pdf

WBG. (February 2019b). *SCSD Indigenous and Tribal Peoples Planning Framework – ITPPF.* World Bank Group (WBG).

WBG. (June 2019a). *SCSD Environmental and Social Management Framework.* World Bank Group (WBG).

WBG. (June 2019c). *SCSD Rapid-Social-Assessment - RSA.* World Bank Group (WBG).

WBG. (June 2019d). *SCSD Resettlement Policy Framework.* World Bank Group (WBG).

WBG.(2019). Forest-Smart Mining: Large-Scale Mining on Forests (LSM).

WBG.(2017). Doing Business Economy Profile 2017: Suriname.

WBG.(2019). State of the Artisanal and Small-Scale Mining Sector. Washington, D.C.: World Bank.

WEF. (2018). *Global Gender Gap Report 2018.* World Economic Forum (WEF).

WHO. (2016). *Environmental and occupational health hazards associated with artisanal and small-scale gold mining.* World Health Organization (WHO). Retrieved from https://apps.who.int/iris/handle/10665/247195

WWF. (2005). *SITUATION ANALYSISOF THESMALL-SCALE GOLD MININGIN SURINAME - Reforming the sub-sector to promote sound management.* World Wildlife Fund (WWF).

WWF-GONIAM-Social Solutions. (2014). Gold Miners' Knowledge, Attitudes & Practices with regard to Mercury, A study in four small-scale gold mining regions in Suriname. Duijves Celine en Heemskerk Marieke.

Appendices