Part I: Project Information

Name of Parent Program
Global Opportunities for Long-term Development of artisanal and small-scale gold mining ASGM) Sector Plus - GEF GOLD +

GEF ID
10847

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
GEF GOLD+ Nicaragua: Enhancing the formalization and mercury reduction in the artisanal and small-scale gold mining in Nicaragua

Countries
Nicaragua

Agency(ies)
UNIDO

Other Executing Partner(s)
UNIDO

Executing Partner Type
GEF Agency

GEF Focal Area
Chemicals and Waste

Sector
Mixed & Others

Taxonomy
Focal Areas, Chemicals and Waste, Sound Management of chemicals and waste, Waste Management, Hazardous Waste Management, Emissions, Mercury, Artisanal and Scale Gold Mining, Best Available Technology / Best Environmental Practices, Influencing models, Deploy innovative financial instruments, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Demonstrate innovative approache, Transform policy and regulatory environments, Stakeholders, Private Sector, SMEs, Financial intermediaries and market facilitators, Type of Engagement, Partnership, Consultation, Participation, Information Dissemination, Civil Society, Beneficiaries, Communications, Education, Public Campaigns, Behavior change, Awareness Raising, Local Communities, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Women groups, Gender-sensitive indicators, Gender results areas, Access and control over natural resources, Access to benefits and services, Knowledge Generation and Exchange, Capacity Development, Participation and leadership, Capacity, Knowledge and Research, Knowledge Generation, Learning

Rio Markers
Climate Change Mitigation
No Contribution 0

Climate Change Adaptation
No Contribution 0

Biodiversity
No Contribution 0

Land Degradation
No Contribution 0

Submission Date
9/16/2022

Expected Implementation Start
6/1/2023

Expected Completion Date
6/1/2028

Duration
60In Months

Agency Fee($)

304,200.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CW-1-1	Reduction of anthropogenic releases/emissions of mercury from Artisanal and Small-Scale Gold Mining (ASGM) into the environment	GET	3,380,000.00	45,507,000.00
		Total Project Cost($)	**3,380,000.00**	**45,507,000.00**

B. Project description summary

Project Objective

Contribute to the reduction of anthropogenic mercury releases/emissions from artisanal and small-scale gold mining (ASGM) to the environment, by strengthening formalization processes and enabling environments that foster: inclusion, access to finance and legal supply chains, adoption of clean practices and technologies, and building skills and technical capacities for the ASGM sector.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
1. Enhancing the formalization of the ASGM sector	Technical Assistance	Increasing formalization through a multi-sectoral and holistic approach to capacity building and enabling an inclusive legal environment for ASGM	Output 1.1. A specific regulation for ASGM promoting the formalization of the sector created Output 1.2. Actors linked to the ASGM sector strengthened to promote formalization processes of the sector Output 1.3. Jurisdictional (JA) and multi-stakeholder approach is tested in the selected ASGM area Output 1.4. Capacities of women are strengthened to exercise their rights and an agenda of actions towards formalization, gender equality and women's empowerment is generated	GET	920,000.00	12,386,521.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
2. Access to finance through financial inclusion and responsible supply chains	Investment	Miners access financial services, formal sources of finance and transparent and accountable supply chains	Output 2.1. Financial mechanisms/services for the ASGM sector designed and awareness on sector opportunities raised Output 2.2. Individual and institutional capacities of ASGM actors improved in the areas of administrative management, entrepreneurship and financial education Output 2.3. Responsible gold supply chains are promoted with incentives for the integration of miners and increased control, monitoring and tracking	GET	920,000.00	12,386,521.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
3. Improving the uptake of mercury-free technologies	Technical Assistance	Good practices implemented and clean technologies adopted for gold processing	Output 3.1. ASGM sector stakeholders adopt good practices and implement clean technologies for more efficient, economically viable and environmentally sustainable gold recovery. Output 3.2. Regulators, ASGM stakeholders and their communities are sensitized on mercury alternatives and occupational health and safety (OHS) procedures	GET	890,000.00	11,982,612.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
4. Knowledge exchange, communication and support for local capacity building	Technical Assistance	Knowledge exchange, communication and support for local capacity building	Output 4.1. Academic centres, universities and technical institutes incorporate training curricula for responsible gold production and trade Output 4.2. Information, knowledge and lessons learned on key ASGM issues generated and disseminated at national and international levels, with a special focus on gender issues	GET	320,000.00	4,308,355.00
5. Monitoring and evaluation	Technical Assistance	Effective and efficient project implementation on the basis of GEF and UNIDO requirements	Output 5.1. The project and its activities are regularly monitored in accordance with the requirements of GEF, UNIDO and the Government Output 5.2. A mid-term review is carried out Output 5.3. Final evaluation of the project carried out	GET	169,048.00	2,275,996.00
				Sub Total ($)	**3,219,048.00**	**43,340,005.00**

Project Management Cost (PMC)

GET	160,952.00	2,166,995.00
Sub Total($)	**160,952.00**	**2,166,995.00**
Total Project Cost($)	**3,380,000.00**	**45,507,000.00**

Please provide justification

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Energy and Mines	In-kind	Recurrent expenditures	2,250,000.00
Recipient Country Government	Ministry of Environment and Natural Resources	Public Investment	Investment mobilized	6,181,000.00
Recipient Country Government	Ministry of Environment and Natural Resources	In-kind	Recurrent expenditures	1,881,000.00
Private Sector	Plantel Los ?ngeles	Equity	Investment mobilized	10,000,000.00
Private Sector	Procesadora y Exportadora San Jos? S. A.	Equity	Investment mobilized	470,000.00
Private Sector	Calibre Mining Corp	Grant	Investment mobilized	7,150,000.00
Private Sector	Calibre Mining Corp	In-kind	Recurrent expenditures	2,500,000.00
Private Sector	HEMCO NICARAGUA S.A.	Equity	Investment mobilized	5,000,000.00
Private Sector	Argor Heraeus S. A.	Grant	Investment mobilized	10,000,000.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	75,000.00
			Total Co-Financing($)	**45,507,000.00**

Describe how any "Investment Mobilized" was identified

During the preparatory phase of the project, the stakeholders and initiatives related to ASGM in Nicaragua were mapped in order to identify synergies and avoid duplication of work. Several meetings and exchanges took place to raise awareness on the objective and expected results of the project, while co-financing modalities and areas of collaboration were identified and summarized in the table above. Significant co-

financing was raised from the private sector. Investments have been mobilized in all project components, but with a particular emphasis on components 2 and 3 which focus on increasing access to finance, the construction of responsible supply chains and the elimination of mercury in the ASGM sector. Two industrial mining companies operating in the country committed their support: (i) Calibre Mining, in the form of grants USD 7,150,000 and in-kind contributions USD 2,500,000 will support the implementation of components 1, 2 and 4; and (ii) HEMCO NICARAGUA S.A. in the form of equity investment USD 34,300,000 to support the implementation of components 1 and 3. Plantel Los ?ngeles, a company that purchases ore from artisanal miners in the targeted project area, plans to invest USD 10,000,000 to support the set-up of an industrial plant to process ore without mercury; and Procesadora y Exportadora San Jos? S. A. committed USD 470,000 equity investment to support component 2. Additionally, support from the international refiner Argor Heraeus S. A. will be provided through a co-financing of USD 10,000,000. Public investment and in-kind contributions to support the sector amounting to approximately USD 2,250,000 materialized through the Ministry of Energy and Mines and USD 8,062,000 through the Ministry of Environment and Natural Resources. UNIDO will provide USD 75,000 of co-financing that will contribute to the M&E component.

D. Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNIDO	GET	Nicaragua	Chemicals and Waste	Mercury	3,380,000	304,200	3,684,200.00
			Total Grant Resources($)		**3,380,000.00**	**304,200.00**	**3,684,200.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

120,000

PPG Agency Fee ($)

10,800

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNIDO	GET	Nicaragua	Chemicals and Waste	Mercury	120,000	10,800	**130,800.00**
				Total Project Costs($)	**120,000.00**	**10,800.00**	**130,800.00**

Please provide justification

The PPG amount requested is necessary to carry out the essential activities planned for the project preparatory phase: stakeholder engagement, data collection and field visits, Environmental and Social Management Plan, gender analysis and action plan as well as assessment of the project executing entity, among others.

Core Indicators

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0.00	68200.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
	68,200.00		

Indicator 4.4 Area of High Conservation Value or other forest loss avoided

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.5 Terrestrial OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 9 Chemicals of global concern and their waste reduced

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
0.00	14.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
	14.00		

Indicator 9.3 Hydrochloroflurocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.6 POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.7 Highly Hazardous Pesticides eliminated

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.8 Avoided residual plastic waste

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		2,120		
Male		2,720		
Total	0	4840	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Part II. Project Justification

1a. Project Description

Describe any changes in alignment with the project design with the original PIF

At the concept stage, the Project Executing Entity (PEE) had not been identified yet. Following a request from the Government of Nicaragua, UNIDO will assume both the execution and implementation functions. More information on the institutional arrangements for the segregation of implementation and executing functions in different directorates of UNIDO can be found in section 6.

The GOLD+ Nicaragua Project will ensure that its actions will respect the legal and institutional framework of the country and the local conditions in the selected areas. Likewise, it will ensure the strengthening of the respective national capacities.

The budget for project components 1, 2 and 3 was slightly reduced to increase the amount initially allocated for Monitoring and Evaluation based on the project needs.

The co-financing identified at the concept stage reached a total of USD 33,675,000 while the co-financing committed at the project submission is higher (USD 45,507,000). The amounts provided by the public sector entities (MARENA and MEM) is lower than initially expected. However, this is compensated by the higher co-financing from the private sector.

a) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

1. Artisanal and small-scale gold mining (ASGM) is the largest source of anthropogenic releases of mercury to the environment with about 38% of global releases. The UNEP Global Mercury Partnership estimates that the amount of mercury used by the sector annually is approximately 1,500 metric tons[1][1].

2. Artisanal and small-scale gold mining refers to gold mining conducted by individual miners or small enterprises with limited capital investment and production[2][2]. Approximately 15 million people are involved in the sector globally, out of which 4.5 million are women and children.

3. Mercury is widely used in the ASGM sector mostly in developing countries and countries with economies in transition to separate gold from other minerals because it is a simple, fast, relatively cheap and widely available substance.

4. During the related mining and processing activities, mercury losses to the environment occur at two stages, namely during the amalgamation process when mercury is mixed with gold and other minerals to for the amalgam, and during the roasting process of the mercury and gold amalgam, when mercury is evaporated, and the gold remains.

5. Due to inefficient and inadequate practices, mercury is released directly into the environment and impacts the human health of miners, local communities, as well as surrounding communities through contamination of water bodies and livelihoods. Pregnant women and women of childbearing age, as well as children and adolescents are most susceptible to the negative effects of mercury exposure.

6. Of particular concern is the organic form of mercury (methylmercury) that can enter food chains triggering bioaccumulation and bio-magnification processes that negatively impact biodiversity and ultimately human health.

7. Uncontrolled mercury emissions and releases can travel long distances around the world contributing to the contamination of ecosystems and fisheries globally.

1.1 Main environmental problems

8. Nicaragua is located on the Central American isthmus, between the Equator and the Tropic of Cancer and borders Honduras, Costa Rica, the Pacific Ocean and the Caribbean Sea. It has an area of 130,370 km2 and a population of approximately 6.6 million people, of which 57% live in urban areas and 43% in rural areas.

9. In the country, ASGM takes place in 33 municipalities mainly in the Northeast, Northwest and centre of the country. Activities are segmented into mineral extraction and processing activities. The extraction method is carried out in open-pit and underground, with largely manual techniques based on the ore body and the visual observations of the miners themselves.

10. ASGM in Nicaragua is developed with obsolete tools and technologies for both mineral extraction and processing. The handling and use of mercury during mineral processing without any kind of protection and safety result in environmental and public health problems.

11. These activities provide an important vector for socioeconomic development since in many cases it is the sole source of livelihood for many families and it offers better income than other economic activities[3][3] while it contributes to the development of the municipalities through a multiplier effect (trade, provision of services?).

12. However, ASGM communities are diverse and are often characterized by relative remoteness and poor access to clean water, adequate sanitation and health care.

Protected areas

13. Nicaragua is located in a transition zone from tropical to subtropical climate, with a great variety of ecosystems: 68 types of ecosystems and plants associated with biological diversity, representing 60% of the total in Central America.

14. The National System of Protected Areas (SINAP) is made up of 74 protected areas legally declared through decrees and laws, as well as 4 declared Biosphere Reserves of which 3 Reserves are recognized by UNESCO, with a territorial extension of 7,286,625 hectares representing 55. 6% of the national territory (not including buffer zones). A total of 206 Private Wildlife Reserves with a total area of 18,361 hectares are also part of SINAP, representing 0.14% of the national territory for voluntary conservation[4][4] (Figure 1).

15. One of the growing areas of concern is the presence of ASGM operations in close proximity to the boundaries of protected areas.

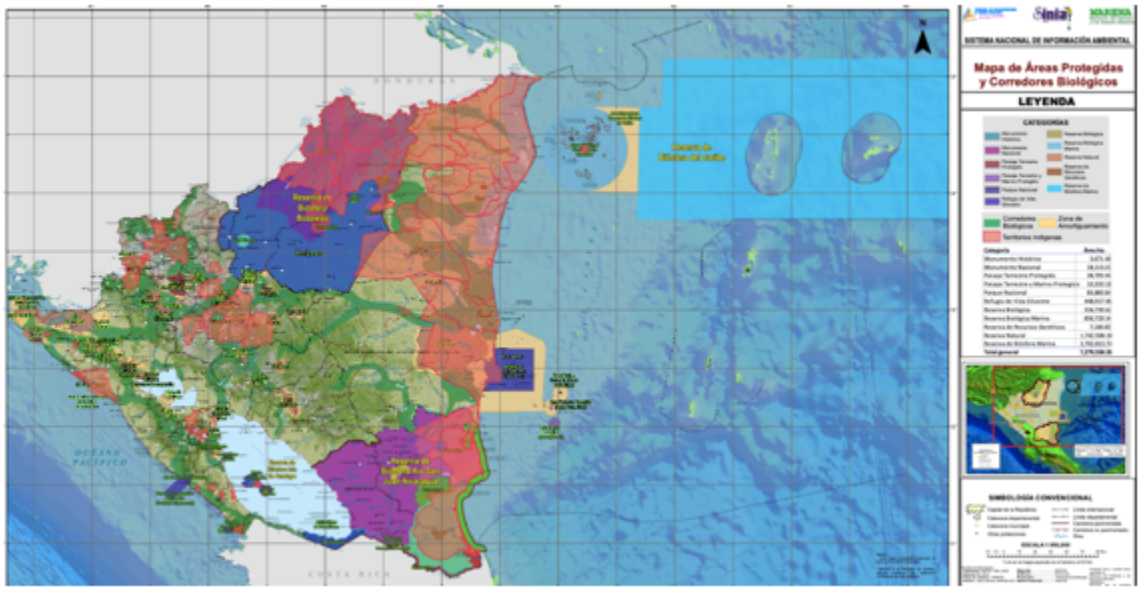

Figure 1: Map of protected areas in Nicaragua. Source: MARENA, 2022

Pollution and management of environmental liabilities

16. ASGM operations are not properly managed and solid and liquid materials and waste are deposited in unprotected areas, on slopes and in water bodies. As a result, mining areas become environmental liabilities, are unstable and unsafe areas for people and animals.

17. The mercury amalgamation method is the most widely used in ASGM in the country. Mercury is added during the crushing and grinding process to the whole ore, to form the amalgam, resulting in the use of large quantities of mercury and increasing the contamination[5][5].

18. In rustic processing facilities (more information in section 2.5), the management of mining waste or tailings is non-existent. These are temporarily discharged in unsealed piles that are not waterproofed and do not have the required storage capacity or directly into surface water bodies or the soil without safety measures, which affects the environment and public health.

19. Other worst practices identified according to the Minamata Convention are (i) the cyanidation of amalgamated tailings and (ii) open burning of amalgam that can lead to serious environmental and health problems.

Deforestation and environmental degradation

20. In Nicaragua, deforestation is one of the processes that contribute most to the environmental degradation of the country.

21. Deforestation dynamics at the municipal level show great variability (Figure 2). The core zones of protected areas are strongly pressured by land uses change due to the increase of agricultural activity and the non-rational use of natural resources[6][6].

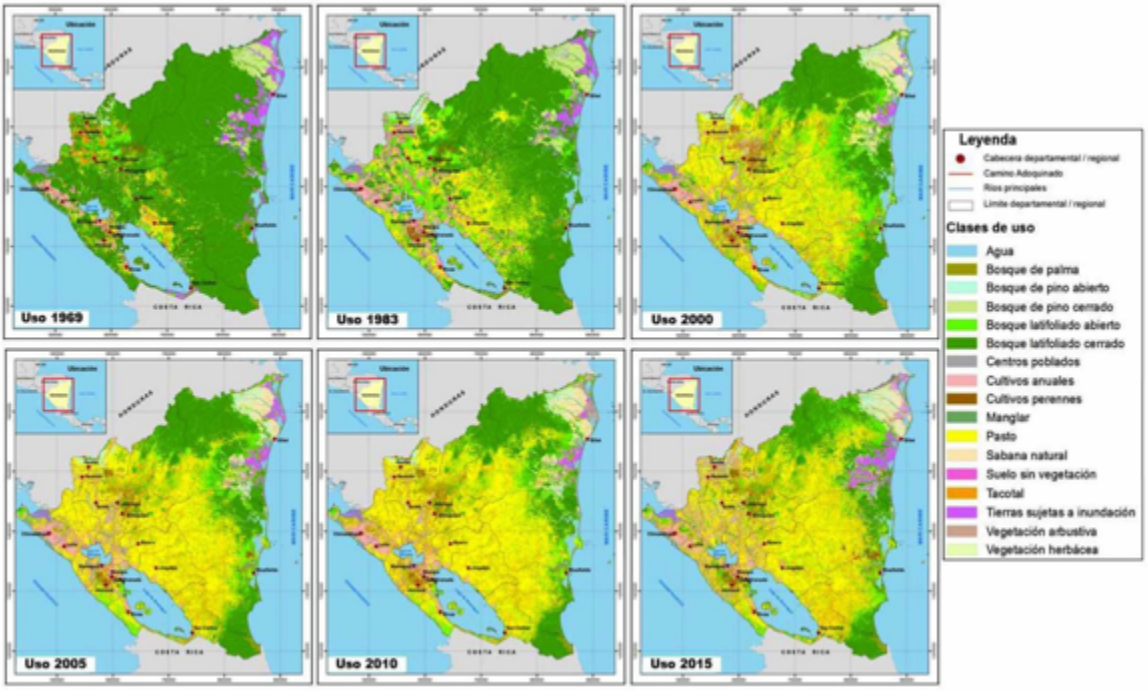

Figure 2: Forest cover at the national level in 1969-2015. Source: IDB, 2018

22. ASGM uses timber in the construction of tunnels, locally called "canyons". This wood does not normally come from forest crops but contributes to the deforestation of the forests surrounding the mining districts.

23. Both the dry forest and the rainforest are often subject to gold mining by ASGM and face varying degrees of threat.

24. In addition, there are other challenges such as landscape alteration, proliferation of abandoned underground mining works, and deterioration of the mined areas.

Water resources

25. Rustic mineral processing methods are normally located close to water sources, because it is easier to (i) access water supply for operations and (ii) discharge wastewater which causes pollution and alteration of surface waters.

26. During ore processing in rustic processing systems, solid and liquid wastes that are generated are discharged directly into the water bodies or onto the ground surface, which through water run-off can be transported to surface waters causing sedimentation of rivers and alteration of the physical composition of the water.

27. Regarding the determination of mercury and other metals in biological samples, a study conducted in 2004 investigated environmental and human tissue concentrations of arsenic and mercury in the mining municipality of Siuna. The environmental samples indicated that mercury concentrations in drinking water, although generally low, were higher near the mine site[7][7].

Biodiversity

28. Nicaragua is a country that contains approximately 7% of the global biodiversity and 13% at the regional level[8][8], as well as the largest and best-preserved tracts of tropical rainforests and lowland ecosystems in Central America. In 2015, the average terrestrial biodiversity intactness in Nicaragua was 53%, indicating a medium level of biodiversity remaining relative to a baseline ecosystem with minimal human impact[9][9] (Figure 3).

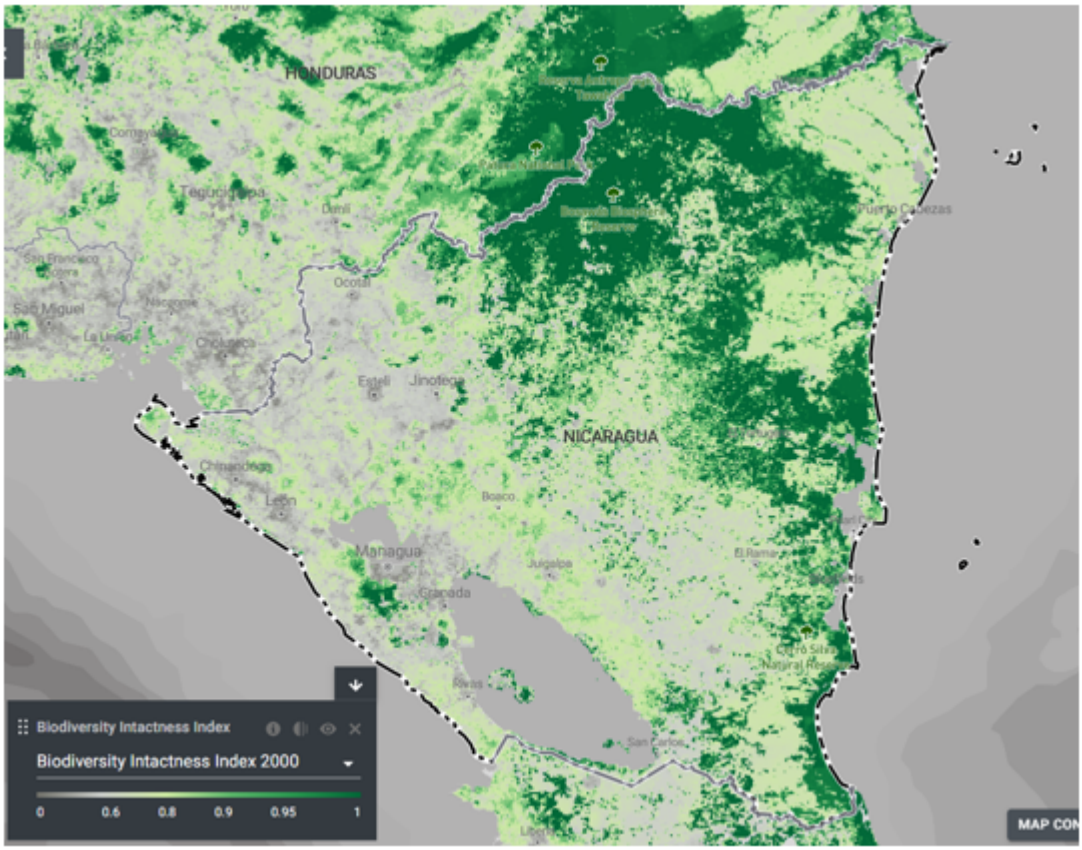

Figure 3. Biodiversity Intactness Index 2000 Nicaragua. Source: UN Biodiversity Lab

29. The Biological Reserve Indio Ma?z and the Biological Reserve Bosaw?s have been identified as critical areas for conservation since they cover the majority of the natural forests with a low fragmentation rate, high biodiversity levels and endangered ecosystems.

30. Artisanal and small-scale mining, due to the nature of the activity, could affect native fauna and the fragmentation of biological corridors[10][10]. Although this phenomenon has not yet been studied in Nicaragua, impacts have been reported in other countries in the region.

1.2Root causes

31. Nicaragua is one of the main gold producers in Central America. In 2019, industrial gold mining exports reached 9.1 metric tons, in 2020 8.5 metric tons and in 2021 10.8 metric tons, according to data from the Ministry of Energy and Mines.

32. Despite the importance of the sector for the socio-economic development of the country, the sector continues to face challenges related to environmental and social deterioration.

33. The majority of ASGM operations do not have authorization or environmental permits for the different extraction and processing activities. Because of this, the methods applied by ASG miners for gold recovery often involve the use of mercury and/or cyanide without proper health and sanitary conditions, causing negative impacts to soil, water and air as well as to human health.

34. Environmental impacts associated with mineral extraction range from deforestation, landscape alteration, and inadequate management of tailings which might result in sediments and pollution reaching water sources. The ASGM operations lack reforestation and mine closure plans which lead to environmental liabilities and hazards for local communities.

35. The mineral processing occurs often through open mercury circuits, damaging the health of those involve via skin contact or inhalation. Burning of the amalgam is done without protection often near urban areas. Mining tailings containing high levels of mercury are temporarily disposed in the ground or piles that are not waterproofed and lack safety measures polluting the soil and posing dangers to individuals. Finally, the occasional but growing re-processing of contaminated tailings with cyanide constitutes an additional threat to the environment and human health.

36. The average monthly income of the miners from the five (5) municipalities visited during the preparatory phase reach NIO 14,000 (USD 398). In general, these municipalities with ASGM activities recorded a lower multidimensional poverty index (MPI) results than municipalities without ASGM presence. Mining revenues constitute the main source of income for these families which can lead to a high dependency rate on the sector. This can lead to a higher vulnerability to the fluctuations of the international price of the commodity or the depletion of mineral resources in the longer term.

37. Informal miners often present higher level of poverty and vulnerability when compared to formal miners since they lack regular incomes, education, skills, or insurance for example.

38. Figure 4 and Figure 5 present the problem and objective trees respectively.

Figure 4: Problem tree

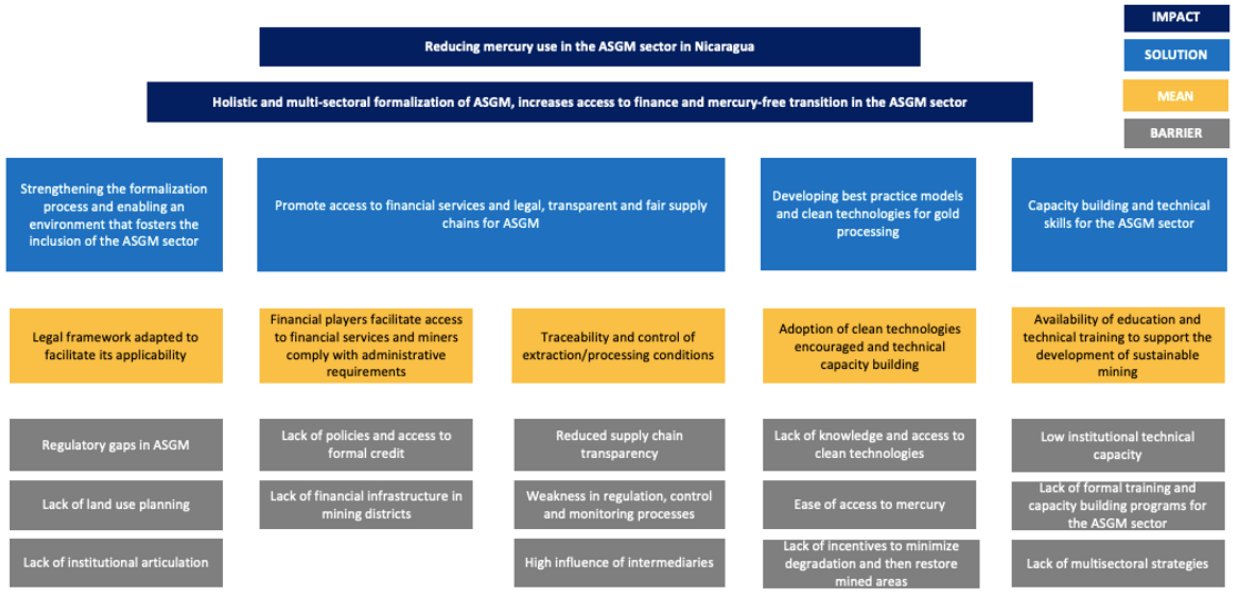

Figure 5: Objective tree

Low level of technical knowledge

39. Generally, there is weak technical capacity in many ASGM countries to help the sector professionalize, train on mercury free techniques and provide adequate support. Barriers to knowledge

transfer and progress in mercury reduction include poor capacity of actors at the local level and knowledge sharing. Despite availability of mercury free technologies, these are not widely used by miners. The reasons for lack of migration to mercury free technologies include; (i) cost of the equipment, (ii) a traditional preference for gravity only methods even though they are not very efficient for total gold recovery, (iii) failure to adapt technologies to the level appropriate for ASGM organisations, (iv) lack of adequate training to enhance capacity during transfer of technology to miners, and (v) lack of awareness on available mercury-free alternatives.

40. The vast majority of ASGM actors are using rudimentary extraction and processing techniques. In particular, the essential pre-concentration step is absent is most cases, demonstrating very limited technical knowledge.

Informality

41. Most ASGM operations do not have the environmental authorisations and permits to carry out extraction and/or processing activities. This is mainly due to limited knowledge on required procedures, a perceived complexity of these procedures, and financial capacity. The absence of authorizations and permits prevent miners from accessing formal financial market, forcing them to operate informally.

42. The informality of ASGM in the country also impedes the achievement of synergies and greater economic, social and environmental benefits for the stakeholders involved in ASGM activities. Many miners consider that being organized in a cooperative implies more responsibilities and commitments with governmental institutions regulating the mining activity in Nicaragua. According to some, this translates into more bureaucratic processes prior to obtaining the mining permits without generating benefits for them.

43. Furthermore, since these operations are not formalized, they lack access to social coverage.

1.3 Barriers

Regulatory gaps related to ASGM

44. Nicaraguan institutions have long recognised ASGM as an important economic activity, which is also essential to the livelihoods of many rural families. However, the current regulatory framework is not adapted to the specificities and needs of the sector.

45. The existing law, regulations and reforms are more oriented towards exploration, exploitation and processing at the industrial level, which in some aspects makes regulation, control, monitoring, technical assistance and sustained attention to the ASM sector difficult; Therefore, to complement the attention to the sector, the Government recently approved Law 1128, Law of Amendments and Additions to Law 387, Special Law on Exploration and Exploitation of Mines and the promotion of a draft bill in the short term for the ASM sector, which would provide comprehensive attention to this area.

46. Currently only two ASGM cooperatives have legal concession mining rights in the entire national territory. The general lack of formal permits makes it difficult to carry out extraction and processing work in a safe and formal manner.

Lack of land-use planning

47. The lack of adequate land management hinders the responsible development of artisanal and small-scale mining activities, as well as coexistence with industrial mining and other economic activities.

48. Conflicts between ASG miners and landowners or mining concession owners are reported over the ownership of the extracted mineral. Similarly, there are conflicts with regulatory institutions (generally municipalities) for not granting mining concessions in some areas or claiming to have a right established in the General Mining Law. Finally, they are also conflicts with industrial companies that are perceived as threats by ASG miners.

49. The lack of land use planning can lead to an increase in social conflicts between groups present in a territory. Among some of the vulnerable groups identified, there are women, youth, indigenous people and afro-descendants as well as internal migrants present in ASGM municipalities.

Need to strengthen institutional articulation

50. Public institutions (MEM, MARENA, DGA, MEFCCA, among others) express interest in continuing to support responsible ASGM development.

51. There are some recent positive approaches such as municipal commissions or the establishment of an inter-institutional committee. It is necessary to strengthen the support to the sector in terms of regulation, control and monitoring, as well as training, technological development and other aspects is required to strengthen local development and environmental sustainability.

Lack of policies and access to formal credit

52. The lack of regulation of the ASGM sector, together with the existing gaps in terms of business development, means that it cannot access credit in the same way as other sectors, such as agriculture or livestock sectors.

53. The ASGM sector is perceived as high risk or conflictual by financial institutions and banks based on non-compliance with legal requirements, as well as lack of due diligence on environmental and social risks.

54. In addition, the lack of knowledge of miners, and the lack of financial and management skills of some mining cooperatives continue to be a major barrier to accessing formal sources of

financing. Therefore, most financing to ASGM comes from informal lenders who may be family members, acquaintances, owners of rustic mining benefits or other local and foreign lenders[11][11].

55. There is a lack of formal financing perpetuates investment in inefficient and hazardous technologies, while at the same time prevents compliance with environmental requirements (environmental management plans, environmental impact studies, mitigation measures).

56. The analysis of private sector financing sources in Nicaragua is challenging due to the lack of complete and systematic information. The causes behind the restrictions in accessing credit are diverse and require a comprehensive assessment to identify solutions to tackle these.

57. Generally, ASGM cooperatives or independent miners do not have formal financial statements that can be audited or follow a general auditing scheme. The problems surrounding the rights and registers of land property limits the capacity to use these assets as collaterals to the credit. Alternatives collaterals as high-liquidity assets do not apply for sectors like the ASGM that use specialized assets that creditors offerors consider difficult to liquidate in the Nicaraguan market.

Low levels of transparency in the supply chain

58. The lack of transparency is an additional challenge as it is difficult to trace the origin of the mineral due to multiple intermediaries and widespread lack of documentation.

59. Indeed, the ASGM value chain in Nicaragua is composed of multiple actors exercising different levels of bargaining power and influence along the chain. In many cases, small-scale miners become highly dependent on intermediaries because of existing financing or loyalty mechanisms.

60. Mistrust between the different actors, strong local competition for the purchase of gold, and the lack of transparency between cooperatives and groups make it difficult to create formal and transparent chains.

61. However, there are some interesting ongoing initiatives such coexistence between industrial sites and small-scale miners that have a high potential to reduce mercury use and support technical capacity building.

62. Nevertheless, there is a need to overcome some of the existing challenges such as mistrust around the terms of sale and purchase, as well as payment terms that leads to miners preferring to process their ore themselves.

Lack of knowledge and access to clean technologies

63. In the ASGM sector in Nicaragua, the traditional ore processing method mostly used is mercury amalgamation[12][12].

64. Rustic processing equipments are numerous and preferences vary from one municipality to another. The main ones identified are known as *rastras, bolillones, t?mbolas* with different processing capacities, Chilean mills and *molinetes*. Generally, processing is limited to recovering the amalgamated gold without pre-concentration. This results in excessive use of mercury and associated emissions and releases.

65. The lack of good practices is due to the absence of a dedicated legal framework for ASGM and the interrelation between technical, economic and social aspects as well as the short term vision preventing investment in more efficient and environmentally responsible technologies. Despite this, there is openness and interest from ASGM organisations to convert to more efficient technologies or introduce mercury-free equipment provided that technical feasibility and economic advantages are demonstrated.

Lack of technical capacity and skills

66. The levels of awareness, capacity, and knowledge among miners are heterogeneous, with most of them being trained by more experience miners, which implies on many occasions the repetition of inadequate practices. There is a low level of technical, environmental and technological capacity, as well as little access to training programmes and formal technical support for capacity building. Additionally, most artisanal miners do not use personal protective equipment (PPE). When used, PPE are mainly helmets and rubber boots as well as in some cases the use of gloves to avoid the friction of the ropes while descending into the galleries.

67. In addition, there is a lack of knowledge sharing among relevant stakeholders. The academic community is little involved, resulting in few studies and research on the ASGM sector[13][13].

Lack of multi-sectoral strategies

68. In certain mining districts, there is certain coordination between the different actors, including the public and private sectors, mining title holders and ASGM operators, who are jointly searching for solutions to common problems with a medium and long-term vision. In other municipalities where ASGM is booming, greater attention given to the sector is required.

69. Gold deposit are finite resources, however municipal development does not seem to contemplate the occupational transition and diversification of activities beyond ASGM. At the same time, ASGM activities are not formal in their vast majority, which demonstrates a low level of planning and strategic municipal development. This will eventually result in challenges in terms of job security in the ASGM municipality.

70. Lack of trust and cohesion continue to be one of the main challenges between cooperatives, independent miners, and public and private actors, generating conflicts such as: disagreements over municipal tax payments, lease or land use payments, payments for processing at sites or Rustic Mining

Benefits (BMR); demand for sites with profitable mining resources; and dissymmetrical negotiation with high bargaining power of companies and intermediaries.

b) The baseline scenario and any associated baseline projects

71. Metallic mining production, mainly gold and silver, is one of the main export sectors in Nicaragua, generating income for the country and positively impacting the economy of the municipalities where it is practised. However, the sector presents numerous challenges due to its environmental and social impacts.

2.1 Regulatory and institutional policy framework

Mining legislation in Nicaragua

72. Relevant legislation in the country related to mining includes the following:

- **Political Constitution of the State**: Chapter 1 (Articles No. 103, 104, 105, 176, 177) and Chapter 2 (Article No. 181);
- **Law 217 (27 March 1996). General Law on the Environment and Natural Resources**: Establishes norms for the conservation, protection, improvement and restoration of the environment and its natural resources, ensuring their rational and sustainable use;
- **Decree 277 (1998). Organic Law of the Nicaraguan Mining Corporation**: Creates the Corporation to promote the State's entrepreneurial activity in mining production. Allows private or legal persons to exploit natural resources as long as they have concession permits and licences from the Ministry of Economy, Industry and Commerce;
- **Law 387 of 2001 (updated by Law 387 2011)**: Special Law on Exploration and Exploitation of Mines: establishes that the State exercises absolute, inalienable and imprescriptible dominion over mineral resources with the capacity to make agreements with private third parties for the exploitation of resources. The Ministry of Energy and Mines (MEM) has the power to grant concessions;
- **Decree 119 (2001): Regulation of Law 387 of 2001**: This elaborates on more specific aspects of ASGM;
- **Law 941 (11 February 2014)**: Creates the National Commission for the Registration and Control of Toxic Substances (CNRCST) which aims to regulate, implement, facilitate, develop and coordinate policies and actions related to toxic substances;
- **Decree 20 (29 November 2017)**: Regulates the provisions of Decree 15 of 2017: Environmental Assessment System for Permits and Authorisations for the Sustainable Use of Natural Resources. Divides environmental assessment by categories: small mining corresponds to Category IIIA of "moderate environmental impact" administered by MARENA through the territorial delegations or the General Directorate of Environmental

Quality in coordination with the Environmental Management Units and Municipal Governments;

? **Decree 7549 (4 September 2014)**: Approves the applicability of the provisions of the Minamata Convention on mercury in Nicaragua; and,

? **Bill on Amendments and Additions to Law No. 387, Special Law on Exploration and Exploitation of Mines (23 August 2022)**: The proposal aims at reformulating articles 2 and 76. In summary, the Bill (i) gives the State the capacity to participate in mining activities through partnerships and alliances with private, public or mixed companies; and (ii) creates a Mining Development and Promotion Fund managed by the MEM to finance and execute activities to promote mining, including exploration of mineral resources, promoting planning of ASM, eliminating mercury use in processing and promoting good environmental practices including the installation of processing facilities. It also proposes additions to articles 39, 77 and 84, which among others, gives MEM the ability to coordinate the delivery of ore from ASM through natural persons, legal entities, and others that are previously authorized by the MEM[14][14].

73. The mining sector is mainly regulated by Law 387 and its Regulations (Decree 119 of 2001), which provide the principles and provisions for the sector. Although this law focuses on large-scale mining, it also describes aspects related to artisanal and small-scale mining (Chapter V).

74. Furthermore, in accordance with Law 40 of the Municipalities Act, at the local level, municipal governments have competence in all matters affecting economic development and environmental conservation, including natural resources within their territorial jurisdiction.

75. At the operational level, municipalities have established Environmental Management Units (UGA) or Municipal Environmental Management Directorates (DIGAM), responsible for defining work plans to ensure environmental protection in their territory in conjunction with national institutions.

Institutional framework related to ASGM in Nicaragua

76. The institutional and administrative framework of the mining sector is made up of ministries and institutions whose organisation and competence are established in Law No. 290, Law on Organisation, Competence and Procedure of the Executive Branch (Figure 5).

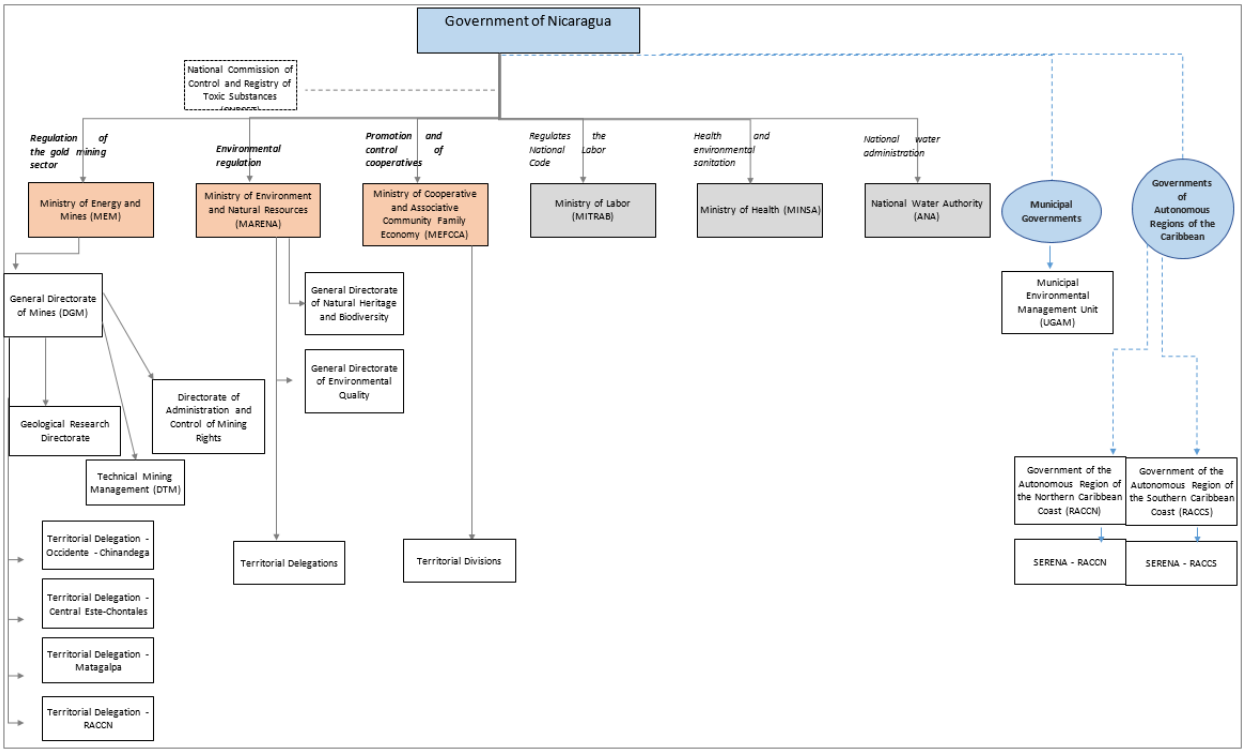

Figure 6. Institutional framework relevant to ASGM in Nicaragua

77. The Ministry of Energy and Mines (MEM) through the General Directorate of Mines (DGM) administers, monitors and controls the use of mining resources through mining concessions, Small Mining Licenses and Special Permits for Artisanal Mining. This includes all aspects related to exploration, exploitation, establishment and registration of processing plants for the exploitation of metallic and non-metallic mining resources.

78. Since 2012, DGM expanded its attention to the ASGM sector with the opening of Territorial Delegations (DT) in departments and autonomous regions where ASGM is developed:

? Mining Territorial Delegation of RACCN (2013): serves the municipalities of Bonanza, Rosita, Siuna, Puerto Cabezas, Waspan and Mulukuku.

? Mining Territorial Delegation of Central-East (2016): serves the departments of Chontales, Boaco, San Juan River, Matagalpa and the Autonomous Region of the South Caribbean Coast (RACCS).

? Mining Territorial Delegation of Occidente (2022): serves the departments of Chinandega and Le?n.

? Mining Territorial Delegation of Matagalpa (opening projected for 2023).

79. The **Ministry of Environment and Natural Resources (MARENA)** is the entity that formulates, proposes and directs national policies for the conservation, protection and restoration of the environment. MARENA administers the Environmental Evaluation System for Permits and Authorizations for the Sustainable Use of Natural Resources. It manages the environmental permits and/or authorizations for the exploration and exploitation of minerals and mining plants, which are issued by MARENA's General Directorate of Environmental Quality. It is also the competent authority for the Minamata Convention on Mercury, through its political and operational focal point.

80. The **National Commission for the Registration and Control of Toxic Substances (CNRCST)** is the body authorised to regulate and coordinate policies, actions and activities related to the import, export, production, commercialisation, distribution, use and consumption; monitoring and control of everything related to toxic, dangerous and other similar substances, including mercury and cyanide used in ASGM. This commission is responsible for administering and implementing the international instruments ratified by the Republic of Nicaragua on chemical safety and other laws related to its competence.

81. The **Ministry of Family, Community, Cooperative and Associative Economy (MEFCCA)** is the ministry designated to promote the different associative forms. As such, it provides in person and online support to strengthen the development of the cooperative sector. This support is key in the ASGM sector given the importance of cooperatives in the formalization process.

82. Also, within the institutional framework, there are other ministries and public institutions that play an essential role in the regulation, management and development of ASGM in a responsible manner, including:

- ? The **National Water Authority (ANA)** is responsible for the administration, conservation, development, use, sustainable and equitable exploitation and preservation in quantity and quality of all existing water resources in the country;

- ? The **Ministry of Labour (MITRAB)** regulates the labour code in terms of the rights and duties of Nicaraguans in labour matters and implements the Regulations of the General Law on Occupational Health and Safety (Decree 96-2007); and,

- ? The **Ministry of Health (MINSA)** is responsible for the promotion, prevention, recovery and rehabilitation of health.

83. The **Secretariat of Natural Resources (SERENA)** is the regional autonomous government's technical body for the administration of the environmental impact assessment and permit system.

84. **Local governments** (*alcald?as municipales*) in mining districts participate through the Municipal Artisanal Mining Commissions or Inter-institutional Commissions for the ASGM sector as mediators in the relations between industrial mine owners, artisanal miners, and the community.

Formalization of ASGM in Nicaragua

85. The MEM issues mining concessions granting exclusive rights of recognition, exploration, exploitation and establishment of processing plants over all mineral deposits existing in the concessioned area.

86. The maximum size of a mining concession is 50,000 hectares with a 25-year term, which can be extended as long as the technical and tax obligations are met. Among the requirements to start mining operations are (i) mining concession title, (ii) environmental permit and/or authorisation and (iii) agreement with the owner of the property.

87. In Nicaragua, Small-scale mining is defined as "the exploitation of mining resources by natural or legal persons that do not exceed an extraction and/or processing capacity of 15 metric tons per day"[15][15].

88. In order to carry out small-scale mining, a special license is required. A related application must be submitted to the General Directorate of Mines (DGM) of the MEM. The letter of request must contain the following information: (i) name, last name and identity card of the applicant; (ii) topographical plan of the location and surface of the lot, which must be free; (iii) mineral to exploit. Small-scale miners must attach to their application a brief description of the work they intend to carry out. Such a license shall be entered in the Registry Book of Special Licenses for Small Miners and will be valid for a period of three years, after which they must follow the concession system established in the Law[16][16].

89. Pursuant to Article 47 of Law 387, Small and Artisanal Mining activities must comply with the provisions and technical standards in force regarding environmental impact and the protection and/or recovery of the environment.

90. In case the daily extraction capacity exceeds the 15 metric tons defined by the law, persons or organisations will be subject to fines, cancellation of the licence or imposition of administrative sanctions, in accordance with Article 100 of the Regulations of Law 387 ??Special Law on Exploration and Exploitation of Mines??.

91. According to the Nicaraguan legislation, **artisanal mining** is defined as "the exploitation of mineral resources by natural persons individually or in organised groups, using exclusively manual techniques"[17][17].

92. Within the areas covered by an industrial mining concession, , the concessionaires must allow access to artisanal miners who are carrying out their activity at the time the concession is granted and as long as a special law regulating artisanal and small-scale mining is approved.

93. For artisanal miners initiating their operations after the concession is granted, an area of up to 1% of the total concession area must be allocated to them. The concessionaire must define it and

notify the Ministry of Energy and Mines, for control and follow-up in coordination with MARENA. The authorization does not presuppose a right of preference in favour of the artisanal miner″[18][18].

94. A Special Permit for artisanal mining is processed at the One-Stop Shop of the MEM. The interested party must submit a letter of application, which must contain the following basic information: material they intend to extract and the location of the site, attaching the following documentation; (i) photocopy of identity card of the applicant, (ii) two passport size photos of each of the artisanal miners who will work under the permit, in case the area of interest is within a mining concession, they must submit the letter of No Objection from the concession holder, (iii) brief technical review of the process to be carried out, (iv) location of the area they wish to work expressed in UTM coordinates NAD 27.

95. This permit has no administrative cost and can be granted for periods of 1 to 5 years.

96. In addition, small-scale and artisanal mining activities must comply with the technical regulations and standards regarding environmental impact and the environment's protection and/or recovery[19][19]. For any of the above mining activity to operate formally, a category III.A Environmental Authorization granted by the Territorial Delegations of MARENA[20][20] is required. Environmental Category III includes small mining and/or processing activities with a production level of up to fifteen (15) tons/day, as a condition for granting the Environmental Authorization[21][21].

97. For **processing facilities** with a capacity of less than 15 tonnes per day, an Environmental Authorization is also required. The following information must be submitted when seeking it: (i) environmental authorization application form; (ii) project profile; (iii) Environmental Management Programme; (iv) project location map; (v) project design plans; (vi) company incorporation deed; (vi) power of attorney of legal representative; and (vii) legal title deed or lease agreement.

98. The formalization and legality process ends satisfactorily when the licenses or permits are granted based on the requirements established by Law 387 of 2001 and the environmental authorizations by MARENA[22][22].

99. Most ASGM mining operations in Nicaragua operate informally as they lack a mining title or formal permit and environmental authorisation to carry out the activity.

100. Among the main challenges regarding informality are the lack of technical, administrative and financial capacity of artisanal and small-scale miners to comply with the requirements stipulated to operate in a formal manner. In addition, the present Law 387 has specific articles oriented at ASGM (article 39-48) but these are often poorly adapted to local realities, which makes application and enforcement challenging.

101. Despite this, various efforts have been made to strengthen the establishment of networks and concerted spaces for improving the management of mineral resources from the construction of a shared vision of the territory and its future development toward a responsible ASGM activity, such as: Municipal Commission for Artisanal Mining and Inter-institutional Technical Commission.

102. The creation of **Municipal Commission for Artisanal Mining (CMMA)** is a mechanism for monitoring the ASGM sector and a space for dialogue to deal with common problems present in the sector. Through these spaces led by local governments[23][23] and the MEM, the interests of all economic sectors are integrated. Successful examples could be replicated in other areas of the country.

103. The CMMAs are made up of: Municipal Mayors, National Police, Army of Nicaragua, Attorney General's Office (PGR), MARENA/SERENA, Local Municipal Authorities, Nicaraguan Ministry of Agriculture (MAG), MINSA, mining and independent cooperatives and mining concessionaires. To date, five (5) CMMAs have been formed in the municipalities of Bonanza, Siuna, Santo Domingo, La Libertad and Rancho Grande.

104. In addition, there is, at national level, an **Inter-institutional Technical Commission** to deal with complaints related to illegal mining at the national level, made up of the heads of public authorities: MARENA, MEM, National Police, PGR, Army of Nicaragua, Nicaraguan Institute for Municipal Development (INIFOM), Ministry of Interior (MIGOB), Public Ministry (*Fiscal?a*).

2.2 Actors in the ASGM sector in Nicaragua

105. In Nicaragua, there are no exhaustive data on the number of people working in ASGM, but preliminary data from the assessment carried out by the Ministry of Energy and Mines show that there are approximately 30,000 people working directly in the sector.

106. Miners are partially organized in the form of cooperatives with a certain level of formality and registered with the Ministry of Family and Community Economy (MEFCCA) or in collectives (people grouped together for a common interest and to share expenses, but without a structure) and family groups, and community leaders are normally present in all the communities. The forms of organisation and governance vary from place to place.

107. Mining cooperatives are organisations legally certified and supervised by the MEFCCA. These organisations are constituted with management and control bodies and a defined internal structure that includes: a board of directors (president, vice-president, secretary and treasurer), a supervisory board and a commission for education and promotion of cooperatives. All members have shares in the cooperative and members usually have defined roles (i.e., extraction, processing, transport). In addition, there is a specific status called *conveniado* or *aspirante* for member with certain rights and obligations, but not officially registered in the MEFCCA.

108. The Territorial Mining Directorates register a total of 36 cooperatives with 2,423 members (Table 1).

Table 1: Number of mining cooperatives and collectives. Source: MEM

Departement/ Region	Municipality	Cooperatives		Miner collectives			Registered miners (MEM)
		Number of cooperatives	Number of members	Men	Women	Total	
Chontales	La Libertad	5	336	491	14	505	172
	Santo Domingo	4	409				70
Le?n	Santa Rosa del Pe??n	1	42	1,081	59	1,140	517
RACCN	Bonanza	17	1,249	1,599	432	2,031	36
	Rosita	2	52				75
	Siuna	1	57				
Chinandega	Villanueva	6	278	4,431	217	4,648	1,170
Matagalpa	San Ram?n			198	14	212	
RACCS				431	2	433	
Nueva Segovia (Murra)							40
Total		**36**	**2,423**	**7,602**	**722**	**8,324**	**2,080**

109. As of July 2022, the Ministry of Energy and Mines has granted three ASGM concessions. One is named Santo Domingo (surface 650 hectares) as per the municipality where it is located . It was granted to the mining holder *Cooperativa de Peque?os Mineros Santo Domingo, R.L.* Two concessions are located in Santa Rosa del Pe??n and are named ??El Nancital?? (surface 200 hectares) and ??El Nancital II?? (surface 200 hectares). They were granted to the mining holder *Cooperativa de Producci?n y Trabajo de Peque?os Mineros El Pilar, R.L.*. The last concession is located in San Juan de Limay ? Estel? and is named ??Las Enramadas-Morcillos?? (surface 150 hectares). It was granted to the holder *Colectivo Guiriseros H?roes y M?rtires de San Juan de Limay-Morcillos, S.A.*

110. According to the census developed by the MEM in coordination with the mining title holders, there are approximately 21,051 miners operating in 33 municipalities in the country, organised in cooperatives and independent groups, forming work collectives of 4 to 6 people (Table 2).

111. However, it is likely that this number could be higher due to the expansion of mining activity in recent years.

Table 2: Number of miners and rustic mining profits. Source: MEM

Department/Region	Municipality	Miners	Cooperative members	Rustic processing system (BMR)
RACCN	Bonanza	10,155	1,194	423
	Rosita		107	38
	Siuna		57	52
	Puerto Cabezas, Waspam, Waslala, Mulukuku			11
RACCS	Kisilala	433		42
	Muelle de los Bueyes			
Chontales	Santo Domingo	762	409	172
	La Libertad	2,254	336	126
R?o San Juan	San Carlos	520		90
Matagalpa	Rancho Grande	781		
	San Ram?n	280		
	San Isidro			
Le?n	Santa Rosa del Pe??n, El Jicaral, El Sauce	1,140	42	277
Chinandega	Villanueva Somotillo, San Francisco del Norte, San Pedro del Norte, Santo Tom?s del Nance, San Juan de Cinco Pinos, Puerto Moraz?n	4,648	278	461
Estel?	San Juan de Limay			
Nueva Segovia	Murra, El J?caro, Quilal?	42		
Jinotega	Wiwili, San Jos? de Bocay			

Managua	Municipio Tipitapa	202		59
TOTAL		**21,015**	**2,423[24]**[24]	**1,692**

112. In relation to the actors involved in ore processing in ASGM, a total of 1,692 rustic processing facilities have been registered at the national level (see section 2.5). These facilities are usually owned by service providers who act as landlords and rent the processing facilities to miners.

113. In addition to rustic processing facilities, there are a number of industrial and fully formal processing facilities that offer an alternative processing service option. The owners of these plants establish ore purchase and sale agreements with the mining cooperatives. Data on industrial plants offering processing services to cooperative is presented below:

- ? HEMCO NICARAGUA S.A.: VESMISA, LA CURVA: located in Bonanza with processing capacity of 140 and 100 tons per day respectively;
- ? DESMINIC S. A.: CERRO MOJ?N PLANT: located in La Libertad with a processing capacity of 6,050 tons per day;
- ? LOS ANGELES PLANT: located in La Libertad with a processing capacity of 165 tonnes per day.

114. The Plantel Los ?ngeles located in La Libertad (department of Chontales) has been operating since 2016, exclusively processing ore from more than 1,500 artisanal miners in La Libertad and Santo Domingo.

115. The business model between industrial concessions and mining cooperatives provides responsible processing opportunities without the use of mercury and a higher gold recovery that allows for a higher income. In addition, industrial companies offer additional services such as financing for working capital, training and technical assistance on various topics (occupational health and safety, administration and finance, etc.). Nevertheless, there is some mistrust around gold content. In consequence, local miners are demanding improvements in the results of laboratory analysis and a greater transparency in the processes.

116. There are also several **industrial mining companies extracting gold** in the country: (i) HEMCO NICARAGUA S.A. in Bonanza, (ii) Desminic S. A. in La Libertad and (iii) Trit?n Minera S. A. in Larreynaga. In addition, various companies are in **exploration**: (i) CBX Nicaragua S. A. in Rosita and Bonanza, (ii) Condor S. A. in San Isidro y Santa Rosa del Pe??n, (iii) La India Gold S. A. in San Isidro y Santa Rosa del Pe??n and (iv) Nicoz Resources S. A. in La Murra and El J?caro.

117. The legislation establishes the possibility of coexistence between industrial mining and ASGM to enable the formalization of the sector, the improvement of practices and territorial

integration. One example of the relationship between industrial mining and ASGM is known as the **Bonanza Model** which takes place in the municipality of Bonanza where artisanal miners operate in the 1% of the concession area of the company HEMCO S. A NICARAGUA.

118. The Bonanza Model was initiated in 2013 as the the Artisanal Mining Management Plan (PODMA). It is based on the framework of the Urban Planning and Development Plan (PODU), a unique municipal development strategy in the Caribbean promoted since 2008 by the Caribbean Coast Development Secretariat, the Bonanza Mayor's Office and HEMCO S. A. It was developed to overcome the difficulties caused by conflicts with artisanal miners.

119. The Bonanza Model is led and regulated by the Municipal Commission of Artisanal Mining (CMMA). This model of mineral commercialization relationship allows for the reduction of mercury use and for community social development.

120. The main functions of the CMMA include (i) validating extraction sites authorized by the concessionaire and/or DGM, ensuring that such activity is carried out in suitable or safe areas,; (ii) overseeing artisanal miner censuses; (iii) ensuring that the results of the laboratory analysis samples are reliable; (iv) monitoring and ensuring that the artisanal mining activity is developed within a framework of equity and justice; and (v) elaborating and updating of the regulations for artisanal mining activities.

121. The company HEMCO NICARAGUA S. A. has two industrial plants for the exclusive use of ASGM located in Bonanza: Vesmisa and La Curva. It also has a mechanised sampling plant (HEMCO plant), a chemical laboratory, an area for ore stockpile and truck reception yards and a ring road for ore transport.

122. The company HEMCO buys ore from ASGM through its Artisanal Mining Office. Miners take their ore to the stockpile yards where four (4) random samples are extracted and marked with barcodes (2 samples are analyze for gold concentration, 1 for moisture content and 1 is kept as a reserve). The results are available after 2 days and the processes can be audited by the miners. Once the analysis results are accepted by its owner, the company proceeds to payment through the local bank on an individual basis or through the constituted accounts of the cooperatives.

123. Overall in the mining triangle (Bonanza, Rosita and Siuna), this model is used by 2031 mining collectives, involving 16 mining cooperatives in Bonanza, 3 in Rosita and 1 in Siuna, for a total of approximately 10,155 artisanal miners[25][25]. In addition to a total of five Artisanal Mining Production Units (UPMA) (3 in Bonanza, 1 in Rosita and 1 in Siuna), training is provided on occupational safety, good mining practices, first aid, use of explosives, administration and management, complementary services are offered such as life insurance and social security registration.

124. Another example of cooperation between industrial mining companies and ASGM actors is La India Gold S. A. As part of its Corporate Social Responsibility (CSR) programme, the company has an environmental and social initiative with the artisanal miners present in its concession. Through this

programme, artisanal miners receive support through training and awareness-raising sessions on occupational health and safety, use of personal protective equipment and social security issues.

125. All these initiatives have great potential to generate mutually benefits to both large-scale and ASGM operations. However, the climate of trust and transparency between the parties remains one of the main challenges. Not all the miners are convinced about the fairness of the purchase agreements and the inequality of power within the negotiation relationships can lead to a preference to process their gold through rustic processing facilities or to conflicts between the parties.

2.3 Financial sector and ASGM

126. ASGM has traditionally been financed by informal lenders. This financing comes mostly from owners of rustic processing facilities, transporters, as well as local and foreign investors and lenders, mainly local intermediaries on behalf of larger intermediaries or exporting companies, jewellers or commercial Small and Medium Enterprises (SMEs)[26][26].

Formal banking

127. Formal banks that are governed by the Super Intendencia de Bancos y Otras Instituciones Financieras (SIBOIF) and the Chamber of Microfinance (ASOMIF) do not have specific credit lines for the ASGM sector. The loans provided by the banking entities associated with these two institutions are mostly SME loans for the agricultural sector (purchase of machinery such as wet milling machines, rice threshers, harvesters, chemical inputs, among others).

128. The amounts traditionally handled vary from USD 2,500 to USD 10,000 with guarantees covering 1.5 times the value of the credit. The guarantees consist of mortgages or crop pledges (coffee, cocoa and basic grains).

129. All banks except Banco Ficohosa have productive credit lines with a green finance component. This component covers mostly investments in technology for crop recovery, protection of water sources, or ecological infrastructure.

130. By way of example, formal banks have available:

- Green finance to develop cleaner production programmes aimed at the medium-scale agro-industrial sector; and,
- Credits for technological innovation (eco-credits), known as SME credits, aimed at the productive sector in agricultural chains (raw materials).

Governmental credit lines

131. The government, through the MEFCCA, has developed a microcredit programme (C$ 5,000 to 150,000 or USD 136 to 4,000) with an interest rate of 10% per year, aimed mainly at rural women

entrepreneurs (3-10 people) to boost the family economy. The ASGM could eventually be covered provided the respective legal permits and documents on the soundness of the business are presented.

Financing offered by the private sector

132. Some private sector entities have a small portfolio of consumer loans targeted at the ASGM sector.

133. HEMCO has a financing programme for artisanal miners that provides credit for consumption (purchase of basic items for mining). It has also earmarked a fund of USD 100,000 through a Trust Fund with the Local Development Fund to enable cooperatives and individual miners to apply for funding for the implementation of economic diversification projects[27][27].

134. The Plantel Los Angeles provides mining cooperatives with credit for transport, equipment purchases and office space. In return, the cooperatives undertake to deliver their members' ore and explore areas of interest together with the campus. The cooperatives in this area offer miners social funds to support funeral expenses and small loans for family consumption and/or investments in processing equipment[28][28].

Openness to facilitate access to finance

135. There is openness on the part of the different ASGM unions and organisations to organise themselves and access financing for the acquisition of equipment and means of protection, as well as technologies to reduce the impact of their activity on human health and the environment.

136. The technical consultations carried out during the preparatory phase of the project indicate a certain degree of openness on the part of the **formal banks** (Banco de la Producci?n, Banco Lafise, Banco Produzcamos, Funderser, Avanz or FAMA) and the existence of opportunities such as the relaxation of their credit access policies, the creation of financial mechanisms such as trusts and the establishment of alliances with cooperation actors and bilateral and multilateral banks.

137. Nevertheless, actions are needed to overcome the following constraints:

- ? Lack of knowledge of procedures and formalities;
- ? Lack of collateral to secure credits;
- ? Absence of a mining right;
- ? Low certainty about the potential of the mineral deposit; and,
- ? Disorganisation of the ASGM sector and lack of institutional presence in the main mining districts.

138. The requirements to access credit differ from one bank to another, but generally, the basic requirements for a SME personal credit are:

139. For salaried applicants:

- ? Filling the credit application in their name and their proposed guarantor;
- ? Signing with the same signature that appears on their ID cards;
- ? Attaching a copy of the applicant?s ID card and the guarantor?s ID card; and,
- ? Attaching the National Social Security Institute (INSS) assessment and a salary certificate.

140. For independent applicants:

- ? Attaching a copy of the single taxpayers? registry (RUC) and a copy of business registration in the mayor?s office of the municipality;
- ? Attaching a proof of income; and,
- ? Financial statement(s) for the past two (2) years signed and sealed by an authorized public accountant.

141. The credit committee can require at any moment a real guarantee which consists of a physical asset, either movable or immovable property (vehicles or real estate).

142. In addition, the lack of information on ASGM operation and profits realized generates suspicion in financial operators when reviewing credit applications from small-scale miners.

143. **Local lenders** do not require guarantees as they normally participate as associates of the miners, and once the mineral is extracted and processed, they are the ones that have priority to buy it from the miners.

2.4 Gold supply chain

144. The gold supply chain features a number of formal and informal stakeholders (Figure 8).

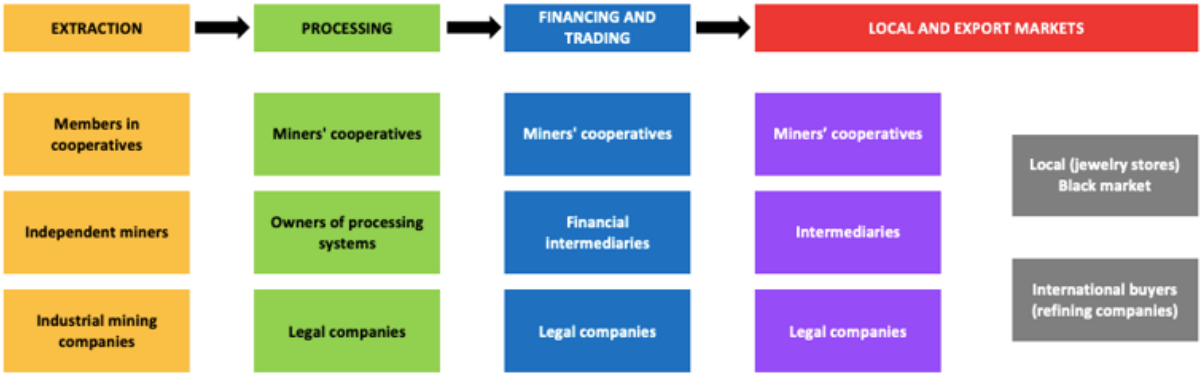

Figure 7: Gold supply chain in Nicaragua. Source: PPG team

145. The following paragraphs provide more detailed information on the main steps of the gold supply chain in Nicaragua.

Extraction

146. The first link in the mineral extraction process are the industrial concessionary companies, which apply advanced technologies. Ore is also extracted by mining groups that have a Special Small Mining License, in most cases using basic methods. Ore is also extracted by artisanal mining groups, who use basic methods for surface (cuttings) and underground (shafts and tunnels) extraction.

147. The basic ASGM extraction methods used unfortunately regularly result in fatal accidents and contributes to environmental degradation including contamination of water bodies.

148. According to field interviews, investment costs to start a 50-60 feet mining shaft (*pozo*) or tunnel (*galer?a*) range from USD 5,500 to USD 6,000[29][29].

Processing

149. The ore processing, is mainly done either by industrial plants managed by mine/concession owners or by rustic processing facilities (Rastras, Bolillones, Molinos Chilenos, T?mbolas de diferentes capacidades y Molinetes) managed by the ASGM sector. The estimated investment needed to set up a *rastra* or *molinete* is approximately USD 7,000. For a *t?mbola* the required investment is around USD 1,500. In the case of the Chilean mill or Chilean *trapiche* the estimated investment is USD 7,000.

150. In some mining districts, industrial mines and ASGM actors formalize their mineral purchase and sale relationship through Agreements.

151. As a reference, Plantel Los Angeles' ore sale and purchase policy is based on an industrial gold recovery of 85% while paying the miner 50 to 65% of the gold content depending on the ore gold grade. The international gold price is used for the transaction.

152. The industrial plants process the ore through cyanidation obtaining higher gold recovery and hence offering higher income to miners.

153. It is worth mentioning that there are groups of artisanal miners who raise concerns about purchase and sale agreements, mainly growing suspicious of the results of laboratory analysis and payment table. Consequently, they choose to process the ore in the rustic processing facilities, which involves unsafe practices and the use of mercury.

154. At country level, many artisanal miners, associated in cooperatives or independent, after extracting the "broza?(Nicaraguan term for ore) do not have the option to process the mineral in industrial plants yet. They either own or rent rustic processing facilities. The rental cost ranges between C$1,000 to C$1,500 (USD 28-42 Dollars) per shift of 24 hours, mainly in rastras. The capacity of a rastra is typically one ton of ore per day. Processing is controlled and carried out \by the owners of the ore. Once the gold is separated as amalgam, they can determine purity, weight and quantity. This allow the miners to estimate their income. When the miner is part of a cooperative owning a rustic processing facility, the charge of using the equipment is included in the monthly fee of 5% of the total ore processed.

155. Another payment scheme that has gained traction is through non-formal agreements between the owner of the rustic processing facility and the owner of the ore. They negotiate a percentage of the mineral processed and of the quantity of the gold extracted. The main disadvantage of such arrangement is the high dependence on the equipment owner's will and low bargaining power for miners due to limited alternatives.

Financing and marketing

156. Members of the mining cooperatives and independent miners incur costs such as work force for extraction, ore transportation, supplies and machinery, mining equipment and tools, among others. Payments to workers are based on production/extraction of the ore. The cooperative deductions to the miners reach 17% which covers transportation, taxes and contribution to the cooperative.

157. Generally speaking, gold buyers are often the source of mercury supply. These buyers include local investors and lenders (owners of rustic processing facilities and owners of properties with gold potential) and outsiders who are mainly links to intermediaries with greater financial capacity (export companies, jewellery shop owners and commercial SMEs based in Managua, Granada or Masaya).

158. Due to the legal concept of separation of land and subsoil ownership, these are overlapping. Sometimes the companies that own the mining concessions often buy the land holdings within their concession, but this is not always the case. Landowners often give permission to independent miners to

extract material from the subsoil by charging a fee of 25% of the processed gold from the material extracted on their property.

159. Foreign lenders finance their local representatives and some independent miners to act as buyers and collectors of gold.

160. Local lenders buy gold from individual miners and associated groups of miners in exchange for financing or inputs such as mercury. Sometimes, as a condition for the loan, they require miners to partner in the mining of a gold vein with a profit share of between 25-45%.

161. Most of the gold purchased by local brokers is sold to larger brokers in Managua, local jewellers and pawnshops, as well as other brokers in Costa Rica, Canada and the USA.

162. In 2020, the main export destinations for Nicaraguan gold were the United States, Switzerland and the United Arab Emirates (UAE)[30][30]. In addition, there is a high percentage of the gold produced that is exported to other countries using informal channels for which there is no formal registration or taxation.

163. According to CAMINIC, the value of gold exports was of the order of USD 665.1 million in 2020[31][31].

164. Table 3 presents the different actors that make up the supply chain in the mining districts.

Table 3: Actors in the gold supply chain in Nicaragua

Actor	**Function**	**Relationship**	**Participation level / influence on supply chain**		
			Extraction	**Processing**	**Trade**
Associated and independent miners	Extract gold-bearing ore	Cooperatives and BMR owners	High	Medium	Low

ASGM cooperatives	Collect, process and market the ore of its partners	Associated and organised miners, independent miners and property owners	High	High	High
Property owners	Provide areas for gold mineral extraction Negotiate compensation for use of areas where mining takes place	Independent miners, cooperatives, mining companies, middlemen and BMR owners	High	Medium	Low
BMR owners	Providing processing services by owning the main gold processing facilities They are investors/finance intermediaries They charge between 33-42 USD per tonne. In addition they keep the tailings for processing by cyanidation Sometimes they are investment partner(s) with a share of up to 45% of the profits.	Independent miners, cooperatives, property owners and middlemen	Low	High	Medium

Local intermediary (informal)	Buying gold from independent miners and groups of associated (informal) miners Finance and sell inputs	Associated miners and independent miners BMR owners Property owners	Medium Low Medium	High Medium Medium	High Medium Medium
National intermediary (formal and informal)	Finance the purchase of gold from local suppliers/dealers Export gold Intermediation can finance the entire extraction and processing process	Exporters and local intermediaries	Low	Low	High
Mining company (formal)	Process ore Finance activities (purchase of assets or inputs) Export	Cooperatives Associated and independent miners Buyers	High High Low	High High Low	High High High

Mercury trade

165. In 2018, the CNRCST introduces a licensing system for mercury imports. From 2018 to 2020, cumulative official imports of mercury for ASGM reached 3.4 tonnes[32].

166. As of 2021, MARENA as the focal point to the Minamata Convention on Mercury has not granted consent for the imports of mercury. Given that ASG miners continue to use mercury, it is assumed that the current sources of mercury supply and trade are from the informal market.

2.5 Main technologies, practices and use of mercury in ASGM in Nicaragua

167. Metal mining in Nicaragua is mainly focused on gold exploration activities, as well as the exploitation of gold and silver mineral deposits, and takes place mainly in 24 mining sites in the country.According to mining cadastral statistics, in 2022 the area under concession for metallic mining exploitation totals 1,528,411.8 (hectares)[33][33].

168. Industrial mining activities take place in several municipalities distributed as follows: (i) exploitation in La Libertad, Larreynaga, Bonanza; (ii) exploration in La Libertad, Larreynaga, Bonanza, Rosita, San Isidro, Santa Rosa del Pe??n, Murra and El J?caro; and (iii) processing in Bonanza, La Libertad and Larreynaga.

169. On the other hand, ASGM mining activity is registered in the following departments and regions (Figure 8):

? Mining Triangle (Bonanza, Rosita, Siuna), Puerto Cabezas, Waspam, Waslala and Mulukuku) - Autonomous Region of the Northern Caribbean Coast;

? Municipalities Santo Domingo and La Libertad, department of Chontales;

? Municipality of San Carlos, department of Rio San Juan;

? Municipality of El Rama (Kisilala)- Autonomous Region of the South Caribbean Coast;

? Municipality of Muelle de los Bueyes - Regi?n Aut?noma de la Costa Caribe Sur;

? Municipalities Rancho Grande, San Ram?n and San Isidro department of Matagalpa;

? Municipalities: Santa Rosa del Pe??n, El Jicaral, Achuapa and El Sauce, department of Le?n;

? Municipalities: Villanueva, Somotillo, San Francisco del Norte, San Pedro del Norte, Santo Tom?s del Nance, San Juan de Cinco Pinos, Puerto Moraz?n, department of Chinandega;

? Municipalities San Juan de Limay, department of Estel?;

? Municipality Murra, El J?caro, Quilal?, department of Nueva Segovia;

? Municipality Wiwili and San Jos? de Bocay, department of Jinotega;

? Municipality of Somoto, Yalaguina, Palacaguina, San Juan de Rio Coco, department of Madriz; and,

? Municipality of Tipitapa (leaching piles), department of Managua.

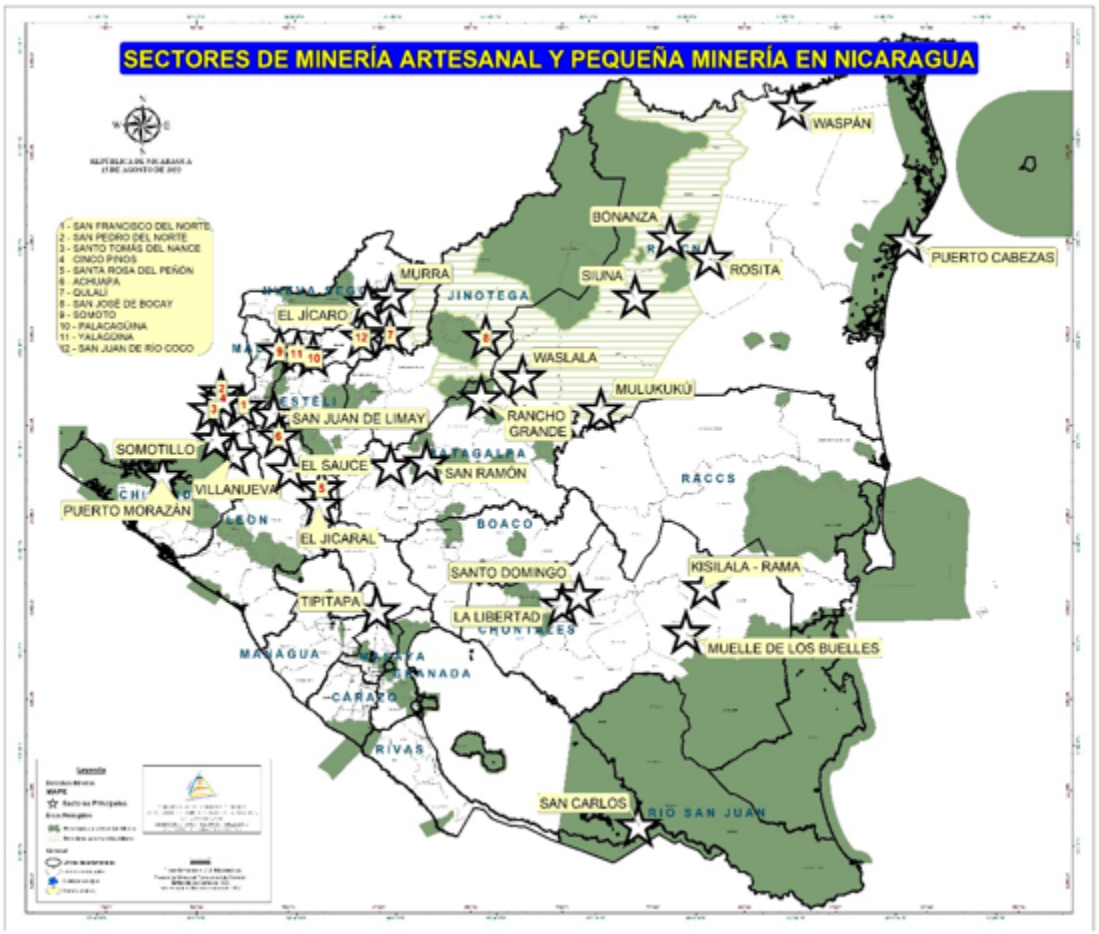

Figure 8: ASGM sectors in Nicaragua. Source: MEM

Ore extraction

170. Ore extraction activities are carried out by artisanal surface methods (cuttings and/or mining fronts) and underground (shafts, tunnels or a mixed of both) among others. These methods lack engineering techniques for the construction of the mining works, which are built in directions of interest or based on the visual decisions of the miners themselves. Underground mining works range from shallow depths to up to 350 feet (around 100 meters).

171. The ASGM actors extracts the ore by using rudimentary tools such as sledgehammers, chisels, axes, shovels, winches, ropes and plastic buckets.

172. In general, mining sites built by artisanal miners lack the necessary safety measures and conditions. The working hours are 7 am ? 1 pm and 1 pm to 7 pm and groups are made up of 6 to 8 people per shift. The average extraction rates are around 2-4 tons per day.

173. The strengthening of mining works through the use of wood in most mining districts is partial and sometimes non-existent.

174. There is also alluvial gold mining known as *g?iriser?a* currently practised in Kuikuinita, Siuna, Rosita, Columbus, Waspam (RACCN); and in Murra, (Nueva Segovia). These operations use rudimentary technology such as panning, or slucing and unskilled labour. Moreover, this practice is often complementary to other economic activities such as agriculture.

175. Migration from agricultural jobs to mining activities takes place often since the income received reaches approximately 4 USD per day and at least 10 USD per day respectively.

Processing methods

176. The ore extracted by artisanal miners is processed through rustic processing facilities (BMR acronym in Spanish) identified as rastras, t?mbolas, bolillones, molinos chilenos, and molinetes; through which the amalgamation method is used with an intensive use of mercury (Table 4). The practice of whole ore amalgamation is present in the majority of the mining districts of the country.

177. The **Tombola** is a metal structure in the form of a cylindrical drum with a concrete or iron base and variable dimensions. Inside, the tank or cylinder contains steel balls or bars, which have the function of crushing and grinding the ore with mercury to form the amalgam mixture. The ore is loaded manually, but the equipment has a motor system for rotary motion operation (average capacity 1 tonne per day in shifts of 1-1.5 hours).

178. The **Rastra** is a mechanized rustic processing facility. Its lower base is a concrete structure of circular shape. A frame that can be made of wood or metal is positioned on top. Its mechanization is assembled from vehicle parts (pulleys, belts, differential, transmission bar, axle). It has a crosshead connected to the upper base where four high density rocks are attached and moved by an electric motor to crush and grind the ore. Most process 1-2 tons per day with a constant flow of water (Figure 8). The working day lasts 24 hours as they work in two shifts to process 1-2 ton of ore.

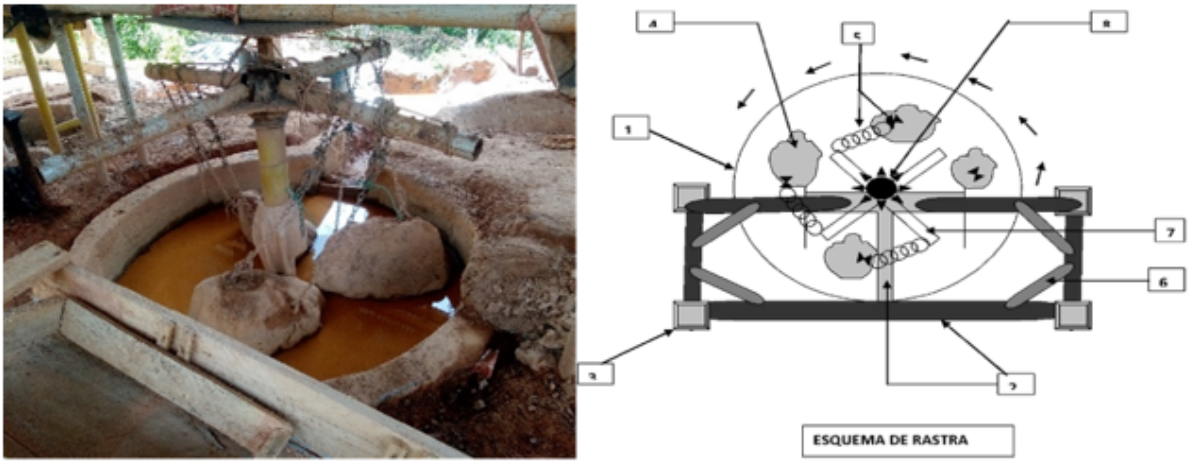

Figure 9: Components of the rastra technology

179. The **Bolill?n** is similar to the rastra, although the base is covered with high-density rocks and sealed with concrete, mainly used to process high grade ore.

180. The **Molinete** is a structure built of concrete material in a circular shape. It has a rotating arm, which can be made of wood or tubes with a rock base that is inserted into the circular structure. It has the capacity to process 0.63 tonnes per day. The operation requires only one person who performs the entire process manually.

181. The **Chilean mill** or Chilean trapiche is a rustic processing system built on a concrete base. It has a circular structure on which two wheels move, which can be made of concrete covered with iron or completely made of iron. This technology works by means of electrical energy by rotating the two wheels on a circular track covered with metal sheets. It has a processing capacity of 2-5 tons per day.

Table 4: Rustic processing systems in Nicaragua. Source: MEM

Department/Region	Municipality	Rastras	Bolillones	Molinetes	T?mbolas	Chilean mill	Total	Total (registered)
RACCN	Bonanza	21	0	0	401	1	423	524
	Rosita	10	0	0	28	0	38	
	Siuna	1	0	0	51	0	52	
	Puerto Cabezas	1	0	0	10	0	11	
Chontales	La Libertad	74	23	28	0	1	126	430
	Santo Domingo	110	1	21	33	7	172	
R?o San Juan	San Carlos	52	12	11	14	1	90	
RACCS	Kisilala - El Rama	14	18	1	9	0	42	
Chinandega	Villanueva	97	0	0	0	0	97	738
	San Francisco del Norte	13	0	9	7	0	29	
	San Pedro del Norte	11	0	5	8	0	24	
	Santo Tomas del Nance	11	0	1	9	0	21	
	San Juan de Cinco Pinos	17	0	5	11	0	33	

	Somotillo	106	0	71	80	0	257	
Le?n	Santa Rosa del Pe??n y Jicaral	79	0	91	63	44	277	
Total		**617**	**54**	**243**	**724**	**54**	**1,692**	**1,692**

Cyanidation Method

182. The formal mining industry uses the cyanidation method under the parameters established in the regulatory framework and constant monitoring by trained personnel.

183. In the last five years, the vat leaching cyanidation method has spread throughout the different mining districts with the aim of recovering a higher percentage of gold. However, this method is carried out in facilities with a low technological level and operated by personnel with poor knowledge and without minimum protection or the use of personal protective equipment (PPE).

184. Substances such as cyanide, lime and caustic soda are used in non-waterproofed piles. This method is applied in the different municipalities with the only difference being the dimensions applied when building the piles (ponds).

185. In the mining sites visited, the practice of cyanidation of tailings resulting from amalgamation methods has been identified, which are marketed for subsequent treatment in leaching piles. This is one of the worst practices identified by the Minamata Convention since mercury and cyanide combine into a chemical mixture that presents a high risk and impact to both human health and the environment.

Mercury Use

186. All the technologies mentioned above (except cyanidation) use mercury amalgamation with a recovery rate of less than 50%.

187. Mercury is traded in the mining districts without any control or regulation. The demand for mercury required to process the gold is determined directly by the miners based on the volumes of ore extracted and the prevailing ore grade.

188. Nationally, ASGM operations use an estimated two ounces of mercury per tonne of ore (2 onz Hg/Ton or 57g Hg/Ton) although with the tombola methods mercury use increases to three ounces per tonne (3 onz Hg/Ton or 85g Hg/Ton). Excess liquid mercury is recovered and stored for later use (Table 5).

Table 5: Mercury use estimations of processing systems in Nicaragua

Type of processing system	Amount of processing system	Estimated average quantity of ore processed (ton/day)	Mercury used (ounces/ton of ore processed)
Rastra	617	1.28	2
Bolillones	54	1.28	2
Molinetes	247	0.16	3
T?mbolas	724	1.2	3
Molinos Chilenos	54	3	3

.

189. Mercury use depends on the quantity, characteristics and grade of the ore, as well as the type of processing process used. The data in this table were obtained in the field during data collection. Therefore, the information is only indicative.

190. In general, the burning of amalgam is carried out in open air in close proximity to urban areas, harming miners that conduct those activities, their families and other people in the surrounding area.

2.6 Academia and research institutions

191. Universities are generally disengaged from ASGM work, with most academic studies related to the sector coming from undergraduate theses at national universities with environmental science degrees.

192. In the educational system, the Autonomous University of Nicaragua (UNAN) has engineering degrees in geology and industrial chemistry, although the curriculum of these degrees does not include specific studies on ASGM. Similarly, the National University of Engineering (UNI) does not have engineering degrees in mining or metallurgy, although it does have a Programme for Research, National Studies and Environmental Services (PIENSA) that has specialized laboratories to provide water quality services, air quality studies and noise levels, as well as thesis studies on these topics.

193. The research institutes usually direct their efforts to carry out water quality and monitoring studies that are contracted by the mining industry based on the Environmental Management Programs and Environmental Permits, the results of which are for private use. The Centro para la Investigaci?n en Recursos Acu?ticos (CIRA) is the main research institution on water resources and has conducted some studies jointly with the Ministry of Health (MINSA). It hosted the first mercury laboratory, with the international collaboration of the Minamata Institute, which allows them to conduct analysis to measure the presence and concentration of mercury in sediments, water and soil.

194. Finally, some socio-environmental studies are also reported to have been carried out by non-governmental organisations between 2016 and 2020, while most studies focused on mineralogy and geology are promoted by the mining industry, mainly by the Nicaraguan Chamber of Mining (CAMINIC).

195. In summary, the efforts made by the higher academic sector have made it possible to know to some extent the degree to which mercury affects the different environmental matrices, through thesis studies, as well as through initiatives and collaborations carried out the above-mentioned institutions. However, it is necessary to have an academic structure (universities, research and teaching centers) with curricula that contemplates specific aspects related to mining, with special emphasis on ASGM. So far, capacity building has been mainly carried out by MEM (waste management and occupational safety) and the MEFCCA (entrepreneurship) but additional investments and efforts are required.

196. National universities (UNAN, UNI, URACCAN), as well as institutes such as the National Technological Institute (INATEC) have great potential to develop knowledge and capacities related to the sector.

2.7 Indigenous people and communities

197. The Political Constitution establishes that the State recognises the multi-ethnic nature of the country, the existence of the Indigenous and Afro-descendant and their right to maintain and develop their own identity, culture and organization. It also recognizes the right to communal ownership of land and establishes the Autonomy regime for the Caribbean Coast[34][34].

198. The Autonomous Regional Governments are strategic actors in development programmes on the Caribbean Coast, as well as the main interlocutors with the legitimate and representative authorities of indigenous and Afro-descendant peoples.

199. In the case of mineral resources, the government shall establish or maintain procedures with a view to consulting the people concerned, in order to determine whether and to what extent their interests would be prejudiced before undertaking or permitting any programmes for the exploration or exploitation of resources pertaining to their lands[35][35].

200. Indigenous territories in Nicaragua represent 32% of the total area of the country. In the Autonomous Regions of the Caribbean Coast, as of 2016, 23 titled territories have been confirmed, equivalent to 54.7% of the Caribbean Coast[36][36].

201. The native and Afro-descendant population of the Caribbean Coast consists of 158,617 persons. The major indigenous people of the Caribbean Coast are the Miskitu, with an estimated population of 120,817 persons, followed by the Sumu-Mayangna with 9,756 persons, then the Rama with 4,185 inhabitants; and finally the Ulwa with 698 inhabitants. The Creole population totals 19,890

people and the Garifunas are 3,271. In the Pacific, Central and Northern regions, the native population is made up of 92,304 people, representing 1.8% of the national population. The population consists of the Chorotega, with 46,002 people, followed by the Matagalpa with 15,240, the Xiu-Sutiaba with 19,949 and the Nahoas with 11,113 members[37][37] (Figure 10).

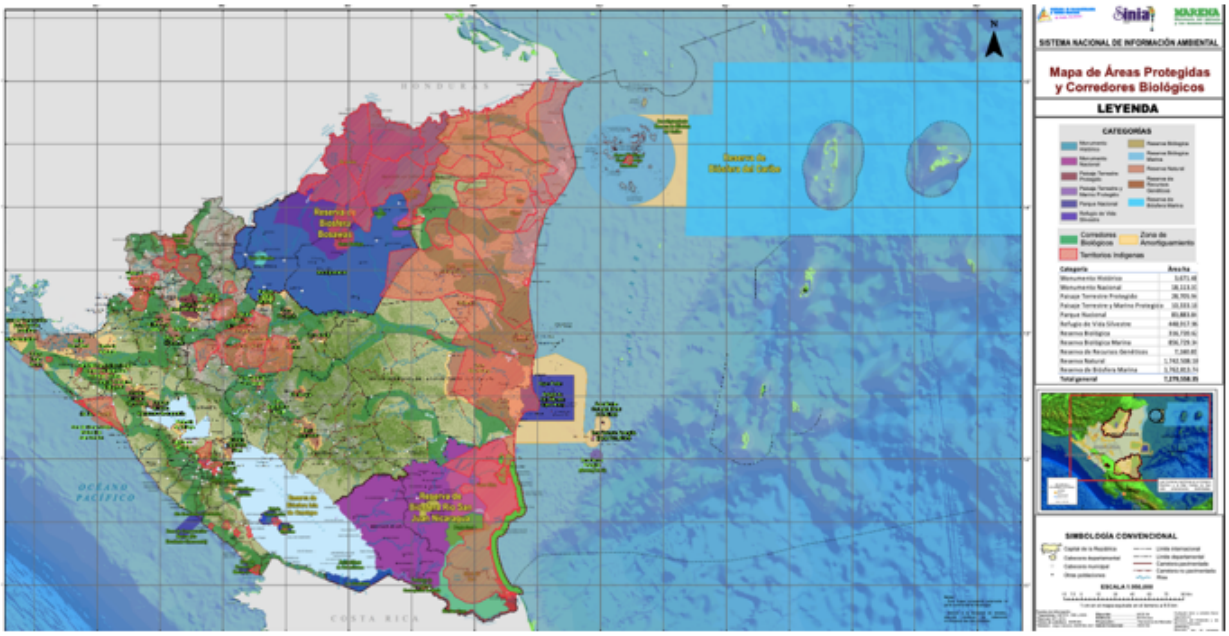

Figure 10. Indigenous people and afro-descendant territories in Nicaragua. Source: MARENA, 2022

202. Although gold mining among these populations has existed since pre-colonial times, in recent years the lack of economic alternatives has motivated indigenous families to engage in artisanal mining in their territories and other municipalities, sometimes generating social conflict.

2.8 National and international ASGM initiatives

203. Mining companies or concessionaires have developed a series of initiatives with the support of municipal governments, the Mining Territorial Delegations of the DGM-MEM, other national institutions linked to the sector, and artisanal miners' cooperatives that have made it possible to improve and contribute to developing more responsible ASGM.

204. Industrial companies often support miners operating in the 1% of their concessions through training in safety and environmental practices, social insurance, technical assistance in mineral extraction and processing, and financing with basic safety equipment.

205. Among the initiatives of relevance are the following:

? Diagnosis of the Current Situation of the Small-scale Mining Sector (1998): Plan Operativo Global del Programa Ambiental Nicaragua Finlandia (PANIF) and the Ministry of Environment and Natural Resources (MARENA) elaborated a diagnosis on the conditions of ASGM, as well as a description of the sites studied, with emphasis on the technologies of production and the amount of labour involved.

? Special Permit Delegation Agreement for G?iriser?a between MIFIC and the Municipalities of Bonanza, Rosita and Siuna (2002): In July 2002, the General Direction of Natural Resources of the Ministry of Development, Industry and Commerce (MIFIC) and the DG of the National Administration of Geological Resources (AdGeo) signed the "Convenio de Delegaci?n de Atribuci?n de Atribuci?n de Permiso Especial para G?iriser?a". The objective was to delegate to the municipalities of Bonanza, Rosita, Siuna and Waspam, the attribution of granting the rights of exploitation under special permit to the natural or legal persons that carry out the activity of artisanal mining or g?iriser?a. The agreement established that MIFIC would negotiate with international organisations to provide support for technical capacity and equipment to the technical staff of the municipalities. ADGEO in coordination with MARENA facilitated training on processes compatible between artisanal mining and the environment. ADGEO supported the mayor's office for the compilation of statistical data on artisanal mining, and provided technical assistance to artisanal miners in the production processes. ADGEO also provided technical assistance to artisanal miners in geological and metallurgical processes.

? Support Programme for the Environment Sector (PASMA/Danida) (2002): Programme of the Danish International Development Assistance to strengthen Municipalities, providing training in environmental legislation and mining, as well as equipment and supplies. As a result, the Mayors' Offices created Municipal Ordinances establishing procedures for ASGM management. By the end of the project, Artisanal Mining Agreements had been signed with the mayors' offices of 11 municipalities.

? Research on mercury in the Siquia and Mico rivers (2006): The Centro de Investigaci?n en Recursos Acu?ticos CIRA/UNAN carried out an environmental diagnosis in the Siquia and Mico rivers in the department of Chontales.

? Project for capacity building in the study and analysis of mercury (2007): The Japan International Cooperation Agency (JICA) implemented a project with MARENA, MINSA and CIRA-UNAN, to (i) support improved reliability of mercury analysis, identify possible mercury contamination of Lake Xolotlan and the mouth of the Tipitapa River in Lake Cocibolca, to (ii) carry out sampling to determine the presence of mercury in biological sources, sediments and human hair, as well as natural and anthropogenic sources of mercury in the lake and surrounding populations.

? Plan de Ordenamiento y Desarrollo de la Miner?a Artesanal (PODMA) (2010): With support from the Municipal Commission of Artisanal Mining (CMMA), the PODMA or Bonanza Model is created, which integrates a mining union of 1,628 miners operating within the concessions of the company HEMCO Mineros Nicaragua. Through this model of operation

under environmentally responsible processing and waste management, the use of dredges and mercury in ASGM in Bonanza has been reduced.

206. In addition, there was work done in coordination with the mining concession owners in each district, artisanal miners and local authorities through the creation of Municipal Commissions for Artisanal Mining and Inter-institutional Commission. Training has been provided on safety, environment, first aid and the legal framework in force, as well as the issuing of mining licences to artisanal miners (2,080 as of August 2022). Follow-up inspections have also been carried out to verify the conditions of mining works built by artisanal miners, as well as attention to conflicts between mine owners and artisanal miners.

Initiatives related to the sustainable landscape or jurisdictional approaches

207. In Nicaragua, there are no initiatives under jurisdictional landscape approaches as such. However, there are important initiatives linked to biodiversity and food security under integrated territorial management models:

- ? Mesoamerican Biological Corridor - Convention for the Conservation of Biodiversity and Protection of Priority Wilderness Areas of Central America (IUCN-CCAD);
- ? Emission Reduction Programme to Combat Climate Change and Poverty in the Caribbean Coast, Bosaw?s Biosphere Reserve and Indo Ma?z Biological Reserve (ENDE-REDD+);
- ? United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries: Environmental Management Framework for Central America and the Dominican Republic (ENDE-REDD+);
- ? Support to the Post-COVID-19 Economic Recovery Process and Development of Sustainable and Inclusive Markets in the Dry Corridor and Prioritised Areas in Central America (SICA-FAO);
- ? Strengthening the Resilience of Multiple Use Protected Areas to Generate Global Environmental Benefits (GEF-FAO).

208. While such initiatives do not directly address the ASGM sector, their efforts aim to reduce ecosystem degradation and fragmentation by implementing a landscape management framework that strengthens conservation and natural resource management activities.

c) The proposed alternative scenario with a description of outcomes and components for the project

209. The Project "GEF GOLD+ Nicaragua: Improving Formalization and Mercury Reduction in Artisanal and Small-scale Gold Mining in Nicaragua" represents a vital opportunity to promote the transition of ASGM towards a more responsible sector.

210. The following section describe how the project will lead to an alternative scenario to the current context experienced by the sector at the national level. To this end, the expected outcomes, outputs and activities expected over the next five (5) years are presented graphically below in the Theory of Change (Figure 10) and explained in the following paragraphs.

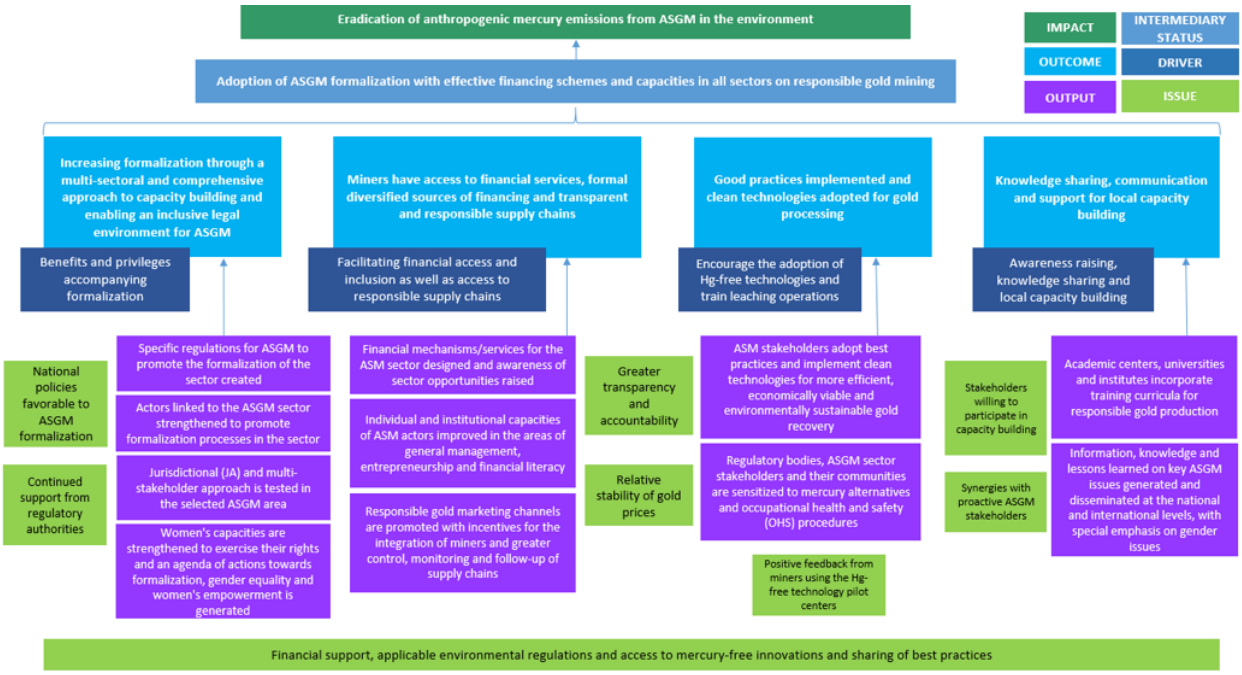

Figure 11: Theory of change

211. The project aims to promote mercury reduction in ASGM through integrated multi-sectoral formalization innovations. The project considers the different stages of the gold production and supply chain, to enable improved functioning of the ASGM sector with adequate capacity to reduce mercury use, extract gold responsibility and contribute to sustainability.

212. The proposed integrated approach responds to and reflects the Programme's Theory of Change (ToC), designing interventions that target the above-mentioned barriers to the adoption of responsible mining technologies and practices.

213. The ToC is based on the problem tree that outlines the root causes and barriers to existing environmental problems in ASGM in Nicaragua highlighted in the previous section. The project outputs are structured to address one or more root causes of mercury use and negative impacts on human health and the environment. Logical pathways between outputs and outcomes are shown with arrows connecting the boxes.

214. If the outputs are successfully completed, then the project will reduce (i) mercury use in ASGM and (ii) negative health and environmental impacts because increased formalization in the ASGM sector through jurisdictional approaches, increased investment through access to financial and

responsible supply chains, increased adoption of mercury-free technologies, and improved knowledge and skills of local actors will drive formalization and responsible mining practices.

215. The main objective of the project is to reduce mercury use by 3.5 metric tons over a five-year period in the ASGM sector in Nicaragua through a holistic and multi-sectoral approach of integrated formalization and increased access to finance, leading to the adoption of responsible mercury-free technologies and access to traceable gold supply chains.

216. Gender mainstreaming will be critical to all project activities, and a Gender Action Plan has been developed to support this purpose.

217. The overall project objective is intended to be achieved through the four main components described below, complemented by a dedicated monitoring and evaluation component.

Component 1. Enhancing the formalization of the ASGM sector

218. Due to the strategic nature of gold produced by the ASGM actors, the Government of Nicaragua has incorporated this sector in the National Plan to Fight Poverty and for Human Development 2022-2026, which will influence further policy development focused on this sector.

219. As noted in the baseline section, there are certain regulatory gaps in the legislation governing ASGM in Nicaragua, resulting in low levels of formalization of operations.

220. One of the challenges to be addressed through the project is the internalization and practical application of formalization processes in the ASGM sector, as the progress achieved will contribute to a more responsible and efficient sector.

221. During the preparatory phase, the project objectives were aligned with the legal framework governing artisanal and small-scale mining activities in Nicaragua and adequate pre-consultations with the government counterparts and other key stakeholders were conducted.

222. Within the framework of the project and in accordance with the jurisdictional/country approach, formalization comprises a process of articulation of the different actors and interests involved in the sector, both at national and subnational levels, including ASGM actors and other relevant actors from civil society as well as other productive sectors linked to ASGM.

223. Key stakeholders, at national and community levels, will have their capacity strengthened through (i) the implementation of a technical training program that will take into account the gender dimension, and (ii) consolidation of the regulatory framework to advance adequate management of the sector.

224. An effective and efficient participation of relevant actors in formalization processes should be based on strengthening their capacities, which is a key element to achieve greater formalization.

Outcome 1 Increased formalization through a multi-sectoral and comprehensive approach to capacity building and enabling an inclusive legal environment for ASGM.

Output 1.1 ASGM-specific regulation to promote the formalization of the sector is drafted.

225. An assessment of the current legal framework on ASGM, including permitting and oversight, taxation, labour rights and occupational safety, environmental protection and gender aspects, will be carried out and strengthening recommendations will be made. As a result, an ASGM special law will be drafted with the participation of mining stakeholders and the relevant institutions involved (MEM, MARENA).

226. There are regulatory gaps that need to be addressed, such as compliance with environmental regulations, relations with communities through active participation, adjustments in the procedures for granting mining rights, regulation for the treatment of mining activity, scope of compliance with the nature and character of cooperatives in the development of mining activities including gender equality, control of gold production and trade, among the main ones. Aspects related to the mercury trade and gender will also be considered.

227. The process of developing the Special Law will involve all stakeholders, including community representatives, experts and officials from all relevant government institutions. Gender mainstreaming will be included in policy development to ensure that women are part of the process and that their interests and concerns are taken into account in policies related to artisanal and small-scale gold.

228. To achieve the greatest effectiveness and inclusion, spaces for dialogue between the different actors will be encouraged through working and consultation sessions in the three selected mining municipalities.

229. The creation of the Artisanal Municipal Mining Commissions (CMMA) is an important space for dialogue to strengthen the ASGM sector, as well as an important platform for peaceful conflict resolution.

230. The project will work closely with the CMMAs in those territories where they exist and will promote the creation of these mechanisms in territories where they have not yet been created.

Output 1.2 Actors linked to the ASGM sector strengthened to promote formalization processes in the sector.

231. Despite commitment and political will to reducing, and where feasible, eliminating mercury use, achieving this will be a major challenge without inclusive finance and investing in human capital (skills, knowledge, abilities) of miners and their representative organizations to achieve legalization and facilitate the process of formalization, of which financial inclusion and business innovation are critical elements.

232. A training programme will be developed to strengthen the technical and institutional capacities of (i) public actors at central and municipal levels, (ii) private enterprise that coexists with ASGM, and (iii) cooperatives, associated groups and independent miners to undertake formalization processes.

233. A diagnosis of the capacities of the public sector at national and local level will be carried out, as well as an analysis of the state of existing ASGM operations in the selected territories. These studies will serve as the basis for the design of a capacity building and development programme (PFDC acronym in Spanish).

234. Capacity building activities (workshops, exchanges and forums) will be carried out for each group with specific objectives (i.e., promotion of formalization plans, programmes and actions, skills needed to undertake formalization processes) in the three selected municipalities and at the national level.

235. The PFDC should include various topics such as the procedure for granting mining rights with a focus on ASGM, environmental regulations, relations with communities and indigenous people and afro-descendants, and between cooperatives and private companies, control of gold production and commercialisation, gender equality and empowerment of women miners, among others.

Output 1.3 Jurisdictional (JA) and multi-stakeholder approach is piloted in the selected ASGM area.

236. The jurisdictional approach is a type of landscape approach that uses government administrative boundaries, mainly sub-national (municipal in the case of Nicaragua), to determine the scope of action and stakeholder participation, rather than social and environmental boundaries. It emphasises the importance of sub-national governments (jurisdictions) in multi-stakeholder land use, including through legal and policy frameworks that guide and regulate natural resource use.

237. The GOLD+ global project (GEF ID 10606) will support the planetGOLD Nicaragua project through a series of webinars, thematic presentations, tools and methodologies workshops and product reviews and consultations with Conservation International (CI) JA expert. Based on the activities foreseen under the GOLD+ global project, planetGOLD Nicaragua intends to participate in JA level 2[38][38].

238. The implementation of jurisdictional approaches as a framework for structuring interventions is generally associated with certain challenges (limited public sector capacity, lack of support and broader initiatives, and others). To overcome these challenges, the prioritised jurisdiction must have the necessary preconditions for a successful pilot project.

239. Based on a set of institutional, technical, administrative, environmental and social criteria, a number of mining areas were identified and analysed during the project preparation phase.

240. On the basis of the information gathered and the consultations carried out, it is proposed to pilot the jurisdictional approach in one of the selected municipalities, the municipality of Santo Domingo. This municipality, where ASGM is the main economic activity, is one of the few territories with a formal ASGM concession (650 hectares granted to the title holder Cooperativa de Peque?os Mineros Santo Domingo R. L.). There are four ASGM cooperatives[39][39] and one industrial mining

concession granted to DESMINIC S. A. that covers the two municipalities of La Libertad and Santo Domingo.

241. The municipality has the presence of several governmental institutions at the local level including the Mayor?s Office and MARENA, MEM, MINSA, INAFOR, MINED, Public Prosecutor's Office, National Police and the Judiciary who are interested in formalizing the activities in the area.

242. In addition, the neighbouring municipality of La Libertad is home to the Los ?ngeles plant. This industrial processing plant implements a model to process ore extracted by artisanal and small-scale gold miners. In this municipality, the members of the cooperative COOPEMILICH R. L. have expressed their willingness to make more responsible and environmentally friendly technological changes that demonstrate the economic profitability and social benefits for the community.

243. The municipality has one of the highest numbers of rustic processing facilities (172) which results in a high potential for mercury reduction.

244. Traditional certification schemes tend to focus on improving one operation at a time, which greatly limits the scale to which environmental and social benefits can be realised. One of the main advantages of the jurisdictional approach is that by having an entire municipal jurisdiction on a clear path to responsible mining and sustainable natural resource management, supply chain managers and investors can avoid the scale limitations of a *"mine-by-mine"* approach. In the case of the artisanal and small-scale gold mining sector, once an entire municipal jurisdiction - including operators and government - has committed to agreed standards and targets, all miners within the jurisdiction can capture the sourcing and investment benefits.

245. While the integrated nature of the jurisdictional approach is its strength, it also places substantial demands on those involved in implementing it because of the various components and skill sets required. While there are a variety of frameworks and process guides for each, most have certain commonalities that constitute the essential elements for successful implementation.

246. The themes to be included in this draft jurisdictional approach and the global expert group responsible for each are:

- ? Assessment of underlying drivers: Analysis of policies and economics that identify the root causes and levers that need to be changed to facilitate systemic transformation towards sustainability;

- ? Governance assessment: Assessment of how decisions are made and implemented so that improvements can be proposed to ensure full stakeholder participation, transparency and accountability in the pursuit of a sustainability vision; and,

- ? Negotiation training and a rights-based approach: Empowering marginalized groups, often local communities, indigenous peoples, women and youth, to play a proactive role in defining their future.

247. In addition to these studies, training on the above-mentioned topics will be carried out within the framework of the jurisdictional or landscape approach.

248. It is also proposed to explore land-use planning and allocation as well as models of collaboration between ASGM and industrial mining through coexistence and multi-stakeholder agreements. Within the different models, mediation and conflict resolution mechanisms and economic diversification strategies should be developed.

Ouptut 1.4. Women's capacities are strengthened to exercise their rights and an agenda of actions towards formalization, gender equality and women's empowerment generated.

249. Research shows that the roles of women and men in the ASGM value chain are gendered. Women are also well represented in jobs that provide ancillary services to the ASGM value chain, for example: mining goods (including mercury), personal protective equipment, food, grocery shops, sex work among others.

250. There is a need for accurate and representative data on women in ASGM in the targeted areas of work, especially given that since the COVID-19 pandemic, the number of women involved in the sector might have increased considerably.

251. The gender analysis will recognise and incorporate the concept of intersectionality[40][40] and ensure that the specific needs of sub-groups (in particular the most vulnerable such as girls and boys, women and men with disabilities, older men and women, widows, etc.) have been taken into account.

252. A socio-economic baseline of women miners in selected areas will be developed with relevant information to guide informed decision-making on gender-related issues. The information collected will be used for communication purposes and will feed into the project communication strategy to raise awareness on the importance gender-equality in the ASGM sector.

253. The starting point for capacity building for women miners should be at the local level in the mining municipalities, giving visibility to women cooperative and independent workers. Local governments will receive knowledge products from the project that emphasise the importance of gender equality in the ASGM sector.

254. Women members of cooperatives or independent workers will be supported to organise themselves into networks or alliances to be represented in decision-making spaces.

255. Encourage specific exchanges between public institutions officials and representatives of women miners at the local level in the three selected municipalities to promote a political agenda that focuses on formalization, gender equality and women's empowerment.

256. In addition, under this output, the PFDC will include workshops on leadership skills and empowerment of women miners to boost capacity and skills to defend their labour and social rights, as well as examples of women leaders or role models within the mining communities.

Component 2. Access to finance through financial inclusion and responsible supply chains

257. The perceived high risk and informality that characterise the ASGM sector are among the main barriers to access to finance in Nicaragua. There have been few experiences related to the financing of small-scale mining in the country, so the project will aim to design innovative mechanisms to improve access to finance.

258. Generally, miners? organizations do not have much experience in record keeping and reporting (e.g. resource exploration and estimation, production tracking, economic modelling, and full-life cycle mine planning) or the preparation of loan applications, which can increase their access to conventional and new financing options.

259. In that sense, the project will improve the capacity and awareness of the ASGM sector, as well as the financial literacy of public and private entities, mining cooperatives, collectives and independent miners.

260. The project also emphasises the need to establish conditions for improved control and traceability, as the current context facilitates smuggling and tax evasion. A more accountable and transparent gold supply chain will lead to greater economic and social benefits for the areas where the activity takes place. For the state, revenues will increase through judicious tax collection.

Outcome 2. Miners access financial services, formal diversified sources of finance and transparent and accountable supply chains.

Output 2.1 Financial mechanisms/services for the ASGM sector designed and awareness of sector opportunities raised

261. From an economic and financial point of view, a situational analysis of cooperatives and independent miners' collectives will identify the sector's financing needs and define a logical route for them to access financing and mercury-free technologies. In addition, an exhaustive review will be made of the incentives offered by Law 987 Law of Reforms and Additions to Law 822 to promote their use by mining cooperatives.

262. The main requirements, advantages and disadvantages of financial mechanisms from banks and entities under the SIBOIF can be found in Table 6.

Table 6: Main requirements, advantages and disadvantages of financial mechanisms

Requirements	Advantages	Disadvantages

? Identity card ? Solvency in relation to the different existing risk centers ? Unique taxpayer registry (RUC) and registration in the mayors? office ? Be of legal age and Nicaraguan citizenship ? Have business and/or productive unit as a source of income ? Minimum experience of 1 year in the activity to be financed in the commerce, service and industry sectors ? Minimum experience of 2 years in the activity to be financed in agriculture and livestock ? Excellent credit record	? They offer lines of credit for various agro-productive activities ? SME loans range from USD 2,000 to 20,000 ? Immediate delivery once the credit is approved ? Interest rate ranges from 18 to 36% per year ? The financing is intended for working capital, and of machinery, equipment, furniture, vehicle, expansions of premises, goods, services and others that supports the improvement of business activity	? High transaction costs ? Highly restrictive access policies ? ASM does not have collaterals required by the institutions ? There is no presence of formal banking in some of the mining districts ? Financial institutions do not have products tailored to the sector ? Credit policies are a barrier to access credit for ASM miners ? Existing products are not aligned to the needs of the ASM sector

263. Public and/or private funds that have the potential to invest in responsible ASGM operations will be identified in collaboration with the relevant financial authorities and regulating entities, as well as an analysis of subsidies, incentives, transfers, exceptions and exemptions established currently for mining concessions by the Directorate General of Revenue (DGI) and Nicaraguan Customs.

264. To increase financing to the artisanal gold mining sector, the project will foster exchanges between private financial institutions and other state institutions by organising meetings to assess joint opportunities to increase financing to the ASGM sector, develop or target specific financing lines to the sector, and enable financial services and infrastructure in the mining territories.

265. The project will also promote capacity building activities with financial institutions to increase their understanding of the ASGM sector and promote the development of a portfolio of financial products and infrastructure related to the sector. Case studies, best practices and financial

products and services provided in other countries will be presented. Similarly, experiences from the agricultural sector will be shared to show how sector-specific credit policies can translate into low default rates.

266. Finally, based on these analyses and exchanges, a financial mechanism will be designed for artisanal and small-scale miners to facilitate access to mercury-free technologies as well as the identification of funds or lines of financing for organised women miners for productive investment in cleaner and more environmentally friendly technologies and other inputs.

267. An example of tentative financial mechanisms that could be explored by the project are micro-finance mechanisms emerging from the ASGM cooperatives allowing them to access finance through revolving funds.

Output 2.2 Individual and institutional capacities of ASGM actors improved in the areas of general management, entrepreneurship and financial literacy.

268. One of the preconditions for accessing finance is that cooperative members and independent miners are creditworthy. To this end, training programmes on finance, accounting and other topics will be developed and implemented to provide miners with the tools not only to access finance, but also to successfully execute their business plans and create a sustainable and more profitable mining operation. All the activities under this output will be conducted in the three selected mining municipalities.

269. The module for independent miners will include topics such as: (i) importance of the financial sector for the development of the sector; (ii) financial products and services, including insurance; (iii) conditions and requirements to be a "credit subject"; (iv) rights and obligations of financial clients.

270. Capacity building for cooperatives will also be carried out, where a module on finance and accounting will be developed and implemented. The content will be developed around: (i) regulation of the ASGM sector; (ii) rights and obligations of cooperative members; (iii) environmental and social safeguards; (iv) the role of cooperative governance; (v) basic financial concepts; (vi) basic accounting and finance; (vii) development of business models and plans; and (viii) digital banking.

271. In addition, capacity building in creative economy and entrepreneurship will be provided so that women miners can engage in alternative income-generating activities that translate into economic empowerment. Alliances will be fostered with entities specialised in the development of women's entrepreneurship as well as with the MEFCCA, the Ministry of the Family, Technical and Vocational Education, and Training Centres.

Output 2.3 Responsible gold trading channels are promoted with incentives for the integration of miners and increased control, monitoring and tracking of supply chains.

272. Interventions will be made along the supply chain to raise awareness of and commitment to the benefits of responsible mining.

273. There is an emerging global market built around the growing interest in buying and selling responsibly mined gold. These market mechanisms play an important role in incentivising miners to abandon mercury use and/or bad practices.

274. The project will build on the experiences of successful initiatives to assess the possibility of working with the private sector to build traceable supply chains for responsible gold.

275. In line with the objective of the planetGOLD programme, the project will apply the planetGOLD Criteria for Environmentally and Socially Responsible Operations[41][41]. The programme will assist country projects to access existing training modules and resources to apply these criteria.

276. In order to achieve this outcome, the following activities are proposed:

- ? An in-depth assessment of supply chains in Nicaragua will be carried out, including key actors, decision-making processes, the current fiscal system, as well as the main challenges and opportunities. To this end, consultations and dialogues will be promoted to identify the main challenges of the purchase models and actions will be proposed to address them and increase trust between the different parties;

- ? Disseminate available tools and systems to ensure supply chain traceability and their possible adaptation and adoption in the national context;

- ? Training workshops on responsible mining and supply chain due diligence for accessing international markets (i.e. planetGOLD Criteria, OECD Due Diligence Guidance, etc.) will be conducted in three selected mining municipalities;

- ? An inclusive procurement model specific to women miners will be promoted in one selected municipalities; and,

- ? At least one (1) responsible and traceable supply chain will be promoted in the selected municipality to support responsible sales to formal markets.

277. Close coordination with responsible public institutions such as MEM, MARENA, INAFOR, DGI, General Directorate of Custom Services and other stakeholders will be necessary through information exchange and regular consultation.

278. It is also essential to involve the private sector in creating partnerships with industrial mining companies that currently buy ore from ASGM (e.g. HEMCO NICARAGUA S. A., DESMINIC S. A., Plantel Los Angeles S. A.) and other responsible marketing companies that can capture gold from mining cooperatives that have made progress in the field of formalization and mercury use reduction, which could lead to a traceability programme.

Component 3. Improving the uptake of mercury-free technologies

279. The reduction of mercury use in ASGM in Nicaragua is undoubtedly the central contribution that the project aims to achieve. The promotion of alternative technologies or the adaptation of those currently implemented represents an important step towards compliance with the Minamata Convention and the reduction of the social and environmental impacts generated by the sector, which have been highlighted in recent years.

280. The project proposes the reduction or elimination of 3.5 tonnes of mercury over the course of the five (5) years of implementation, a goal that will only be possible to achieve if technological changes are undertaken in the current production processes combined with an enabling framework.

281. The gold processing that takes place in ASGM activities in Nicaragua is inefficient and includes several of the worst practices defined in the Minamata Convention using very significant amounts of mercury.

282. Based on the analyses carried out during the preparatory phase, the project considers the following strategies: (i) use of gravimetric concentration followed by direct smelting to eliminate the use of mercury where free mineral is found and (ii) capacity building support for the professionalisation and safe management of the cyanidation process.

283. However, to promote technological change, the project proposes an integrated approach and a practical application in specific mining sites, where the necessary financial, regulatory, political, technical, environmental, knowledge management and formalization aspects will be considered.

Outcome 3 Good practices implemented and clean technologies adopted for gold processing

Output 3.1 ASGM sector actors adopt best practices and implement clean technologies for more efficient, economically viable and environmentally sustainable gold recovery

284. During the project inception phase and in conjunction with MEM, the three mining municipalities in which the project will operate and, within these zones, the actual mining sites will be confirmed.

285. An impact assessment of the introduction of new technologies, including mitigation measures for the eventual displacement of vulnerable populations including women and indigenous people, will be carried out. Alternative livelihood strategies will be considered for cases where mercury-free gold mining technologies may threaten existing livelihood sources.

286. The project will seek to develop models that (i) are applicable to different levels of artisanal gold mining operations both in ore extraction and processing in terms of financial and technical capacity and (ii) achieve higher gold recoveries.

287. It is envisaged to work with pilot operations mining primary hard rock deposits (i.e. where mercury emissions are highest) through the application of good mining practices and technologies. In that sense, the equipment(s) to be proposed will be based in the physical, chemical and mineralogical characteristics of the ore to be treated that will be identified based on analysis and/or test.

288. The project will provide the necessary technical assistance for each of the pilot operations in the three selected municipalities, including, inter alia, good practices in extraction and processing, formalization, traceability, trade, gender equality, occupational health and safety, environmental protection, in order to strengthen the overall capacities of ASGM cooperatives.

289. The application of new technologies requires trained personnel, both from the ASGM operators where the technologies are applied, as well as personnel from other operations where their application is feasible according to the results of analysis on the ore at each defined site. In this regard, the project will train cooperative members and independent miners in mercury-free technologies and occupational health and safety (OSH) and the application of good environmental practices.

290. It is also planned to support operations in the consolidation of cyanide leaching technologies.Existing cyanide leaching operations, outside of industrial mines, are using rudimentary processes. There is therefore a strong need for adequate technical capacities to operate and maintain these operations as well as manage the associated tailings in an environmentally safe and socially responsible manner.

291. The guide "Best Management Practices for Cyanide Use in the Small Gold Mining Sector"***[42]***[42] developed by the planetGOLD program and the ??Guidance document on the management of artisanal and small-scale gold mining tailings??[43][43] developed by the Minamata Convention Secretariat will be the basis for building local capacity.

292. Actions will be considered to eliminate "cyanide leaching in sediments, ores or tailings to which mercury has been added without first removing the mercury".

293. The pilot projects will be systematically documented for dissemination and awareness raising so that other mining operations can replicate lessons learned and benefit from the knowledge generated.

Output 3.2 Regulatory bodies, ASGM stakeholders and their communities are sensitized to mercury alternatives and occupational health and safety (OSH) procedures.

294. The paucity of information on alternatives to mercury use in ASGM is one of the main challenges in the country.

295. To respond to this challenge, the qualitative and quantitative information on the main current ASGM practices compiled in the baseline scenario of the National Action Plan (NAP) will be reviewed and recommendations on technologies applicable to the characteristics of the ore in Nicaragua will be provided.

296. The project will work closely with the CMMAs, inter-institutional commissions and the Territorial Mining Delegations to collect and disseminate the main experiences related to mercury alternatives and good practices in ASGM.

297. Awareness-raising events on these alternatives will be carried out highlighting the cost-effectiveness to encourage mining cooperatives, collectives and independent miners to adopt them.

298. The gender analysis confirmed that a high percentage of women use mercury in gold recovery, especially in informal activities. The vast majority do this work with basic tools, which poses a greater risk to their health and that of their families.

299. The unique risks that mercury poses to women's health due to their role in ore processing and the adverse effects on exposed individuals with special emphasis on prenatal exposure to mercury will be highlighted, through the organisation of awareness-raising events to increase knowledge about the impacts of mercury, resulting in better health for families and communities in the three selected municipalities.

300. Training workshops on support, monitoring and follow-up to the ASGM sector will be conducted for territorial technicians, local and national government technicians linked to the ASGM sector in the three selected municipalities.

301. Finally, collaboration with public institutions and private industrial mining companies will be promoted within the framework of the organisation of the Mining Fair or other types of events at the national level to include information related to access to financing and mercury-free technologies for ASGM.

Component 4. Knowledge exchange, communication and support for local capacity building

302. The sustainability of the project and the achievement of lasting results are closely linked to the implementation of a good knowledge management and communication strategy. The possibility that the experiences and lessons generated by the project in the pilot sites can be amplified and replicated in the gold sector will depend, to a large extent, on the capacity to systematise, document and socialise them.

303. This component will contribute to capacity building, knowledge sharing and communication between the different components and will include a focus on maximising communications at the local level and sharing results with the global community.

304. Stakeholders including public entities, concession owners and financial institutions, among others, will be invited to share their materials and contribute to the generation of knowledge on ASGM at the national level.

305. The information and documentation collected will also be made available through the PlanetGOLD Nicaragua website hosted on the planetGOLD website.

Outcome 4 Knowledge exchange, communication and support for local capacity building

Output 4.1 Academic centres, universities and institutes incorporate training curricula for responsible gold production

306. The project will contribute to the strengthening and involvement of academic institutions such as universities, research centres and technical training institutes to help improve or complement curricula on technology related to geoscience, environment, metallurgy, hygiene, occupational health and safety, finance and administration, and related professions related to ASGM considering technical, economic, environmental and social aspects.

307. Institutions with technical expertise will be identified and partnerships established to enhance the adoption of mercury-free technologies. Target institutions include government services (i.e., INATEC), technical vocational training institutions (TVT), universities, and mining cooperatives and collectives, among other entities.

308. The content of the training curricula will be based on existing curricula, such as the one developed under the planetGOLD Burkina Faso project.

309. Within these curricula, relevant and appropriate training approaches will be deployed to empower miners and other stakeholders to support the transition to mercury-free technologies.

310. Awareness raising events on the curricula adapted to the Nicaraguan context will be conducted with academic institutions, universities and the municipal mayor?s offices where ASGM is present to promote the adoption of the curricula as part of the academic and educational offerings.

311. Collaboration between technical institutions and mining cooperatives will be explored to involve trainers from host communities and associations. Peer learning and sharing of experiences among miners will have a replicability effect on technology adoption.

312. Synergies with institutions at the international level will also be enhanced. For example, there are several universities offering online education and training in Spanish on the Minamata Convention and ASGM-related topics.

Output 4.2 Information, knowledge and lessons learned on key ASGM issues generated and disseminated at the national and international level, with a special focus on gender issues

313. To ensure replication of the positive project outcome and improve the general negative public perception of the artisanal and small-scale gold mining sector, it is essential to disseminate information on the sector's progress in formalization, mercury use reduction, gender equality and good environmental practices. This will allow the general public to learn about the challenges, efforts and positive results achieved by the sector and by this project in particular.

314. In addition, capacity will be built at the local level through face-to-face events, as well as effective methodologies to capture the attention of ASGM and to support traditional workshop and training models that help institutionalise responsible mining methods at the community level.

315. The awareness raising plan that will be developed and implemented as part of the project will contain important elements related to gender. The project?s gender expert will ensure that the developed awareness raising plan and its activities meet the needs of female and male miners.

316. Additionally, the activities envisaged under output 4.2 will pay special attention to indigenous people and afro-descendant groups that will be invited to participate in project activities and exchange on lessons learned to ensure that these can be applicable and/or adapted to their territories.

317. The following activities are proposed:

- ? Document and disseminate lessons learned and information generated as a result of the pilot experiences implemented in the framework of the project and share them on the planetGOLD website[44][44], Global Forums and other global dissemination channels;

- ? Conduct women miners' experience exchange and empowerment learning events (minimum 3); and,

- ? Conduct media and information campaigns to inform the general public and key stakeholders about the challenges and developments in the sector in Nicaragua (1 per year).

318. These events should be held in an inclusive environment and where the gender issue includes the effective participation of women miners.

319. With regard to communication, the project will contribute to communications at the planetGOLD programme level through the following activities:

- ? Develop a project strategy for communications in line with the overall programme communications strategy;

- ? Use the planetGOLD country logo and brand assets for all communications materials;

- ? Adhere to planetGOLD's style guide and message guide in the production of external materials, adapting global messages to the national context;

- ? Share relevant visual assets in a timely manner with the global project for global promotion and dissemination;

- ? The project communication specialist will participate in the programme's communication network, including regular calls, digital communication platforms, trainings and sharing relevant communication related activities at country level;

- ? The project communication manager will attend Annual Programme Meetings (APMs) when held in concert with the Global Forum (GF) and communication meetings during annual programme meetings; and,

- ? Publish at least one original blog article per year and contribute to other news articles, events, photo essays, videos as materials for the programme website.

320. In terms of the knowledge management provided by the planetGOLD programme, the following activities are foreseen:

- ? Send at least two (2) representatives to each planetGOLD Global Forum and participate in the presentation of the project results there;
- ? Send at least two (2) representatives to each planetGOLD Annual Programme Meeting (APM) and participate in the presentation of the project results there;
- ? Subject matter experts participate in regular knowledge exchange meetings/networks;
- ? Share relevant (non-confidential) project materials, approaches and documents that may provide relevant information to serve as examples or models for other countries; and,
- ? Ensure that all public-facing documents generated by the project are disseminated through the planetGOLD knowledge platform as well as other national platforms such as the National Public Information System and the official website of the Ministry of Energy and Mines.

321. The project will also:

- ? Participate in virtual start-up/implementation orientation with global project staff;
- ? The Project Manager will attend bi-monthly programme coordination calls;
- ? The Project Manager will participate in regular (quarterly) Programme Advisory Group (PAG) calls and attend or delegate attendance of relevant staff at PAG sub-committee meetings; and,
- ? Adopt a stakeholder engagement strategy consistent with programme guidelines which must be validated with the institutions involved.

d) Alignment with GEF focal area and/or impact program strategies

322. This project is aligned with the GEF-7 Focal Area "Chemicals and Waste" as one of its objectives is to reduce and/or eliminate mercury emissions and releases in the activities and processes listed in Annex C of the Minamata Convention, especially in those activities that generate the highest emissions and releases, as is the case of the ASGM sector in Nicaragua.

323. It also contributes directly to the "Industrial Chemicals Program" (CW 1-1 program), which among other objectives, seeks to eliminate or significantly reduce chemicals used/emitted in processes, in this case, mercury, within the framework of the Minamata Convention.

324. A specific objective within this program is to reduce and eliminate mercury in the artisanal and small-scale gold mining sector. The GOLD+ programme and this country project will contribute directly to this objective, building on the GOLD programme (GEF ID 9602).

325. This project will seek to strengthen national legislation as well as regulatory capacities to comply with Minamata Convention obligations.

326. The project is fully in line with the GEF-7 programming principles of cost-effectiveness, sustainability, innovation, private sector participation, and leveraging existing networks.

e) Rationale for incremental/additional costs and expected contributions from baseline, GEFTF, LDCF, SCCF and co-financing.

327. The GOLD+ program will provide incremental funding for the reduction of mercury use in ASGM in participating countries, including Nicaragua. It will build on the GOLD programme (GEF ID 6901) currently being implemented, using the existing knowledge platform, lessons learned, capacity building materials, databases, proven technologies and market opportunities.

328. The GEF grant will be used primarily to provide and operationalize technical and operational knowledge, methods and tools to improve mercury reduction and elimination in the artisanal and small-scale gold mining sector, among mining cooperatives and artisanal gold miners, regulators and government officials, as well as financial institutions.

329. Specifically, GEF funding will be used for awareness raising, capacity building, knowledge management, technical plan development and advisory support under the four program components. Project activities funded by the grant will design and implement financial mechanisms that will support the financial inclusion of miners. Additional technical assistance will facilitate the assessment and implementation of enabling policies and regulations that will increase formalization levels.

330. In addition, Nicaragua is extremely vulnerable to the impacts caused by climate change. Its high biodiversity threatened by environmental challenges including deforestation and land degradation by productive activities, make it urgent to transform the ASGM sector and reduce its negative impacts to ensure the welfare of families and the socioeconomic development of the country.

331. The country project in Nicaragua will coordinate with the work of national and local partners and contribute to complement their planned interventions.

332. Co-financing will come mainly from government sources (MARENA, MEM) and private sector actors operating in the country (Calibre Mining, Plantel Los ?ngeles, Procesadora y Exportadora San Jos?) and internationally (Argor Heraeus S. A.).

333. Based on the initial mapping of key stakeholders, the project will continue to disseminate its scope and information during the inception phase to ensure that identified synergies, local knowledge, tools and networks can be leveraged and additional resources identified.

334. During the design phase of the GOLD+ project, the following entities have shown their commitment to provide co-financing resources:

- ? Ministry of Energy and Mines (MEM);
- ? Ministry of Environment and Natural Resources (MARENA);
- ? Argor Heraeus;

? Calibre Mining Corp;

? Plantel Los ?ngeles;

? Procesadora y Exportadora San Jos?;

? UNIDO

335. Details of the initiatives and activities being developed by these institutions and others that could participate during the implementation of GOLD+ in Nicaragua are described in the Stakeholder Participation Plan (Annex H).

336. GEF funding will primarily ensure global environmental benefits in terms of mercury reduction that are additional to the baseline.

337. As the National Action Plan on ASGM (NAP) is still in its final stage of development, the project will coordinate closely with it to further strengthen coherence and complementarity.

338. In the absence of the GEF grant, the artisanal and small-scale gold mining sector will continue to lack priority in actions to support its responsible development, despite its importance for the country's economic growth. There is a lack of systematic investments that contribute to further development based on responsible gold production leading to significant mercury reduction.

339. As described in section 2.8, there are few examples of improvement in terms of efficiency, reduction or elimination of mercury use in Nicaraguan ASGM.

340. Without GEF support, miners will continue to use significant amounts of mercury due to the widespread practice of whole ore amalgamation.

341. Addressing ASGM-related problems will therefore continue to require resource mobilization, both from government budget and GEF support. In addition, financial mechanisms need to be instituted through a multi-stakeholder approach, including the private sector, to ensure that miners can acquire mercury-free technologies and maintain their financial sustainability.

342. The project will be cost effective as it aims to directly reduce 3.5 tons of mercury with a GEF grant of USD 3,380,000 which means that the cost effectiveness of the project is estimated at USD 965 per kg of mercury directly reduced. The cost-effectiveness is even more evident when taking into account the replication factor of 3 after project completion, which would reduce the cost to USD 241/kg Hg. In addition, the project will also mobilize approximately USD 45,507,000 from the public and private sector for investments in responsible artisanal gold mining.

343. Based on previous initiatives, as well as the results that the project gradually generates, new partnerships, commitments and leveraging of additional funds, especially from the financial system and private investments, can be generated.

f) Global Environmental Benefits (GEFTF) and/or Adaptation Benefits (LDCF/SCCF)

Landscape area under improved practices

344. This indicator captures the area of the landscape that is in production (i.e., mining, agriculture and other productive sectors) and whose soil, air and water are sustainably managed.

345. Table 7 details the surface of the mining areas visited during the preparatory phase of the project: La Libertad, Santo Domingo, Santa Rosa del Pe??n and El Rama-Kisilala.

Table 7: Surface area of proposed jurisdictions. Source: Demographic Profile of Nicaragua 2020

Municipalities	**Surface area**
La Libertad	67,700
Santo Domingo	68,200
Santa Rosa del Pe??n	22,800
El Rama-Kisilala	375,300

346. The jurisdictional approach will be tested in one (1) of these areas. A preliminary assessment has identified Santo Domingo as the priority area, although this will be confirmed during the project initiation phase. Therefore, the related co-benefits calculated at the CEO approval stage are 68,200 hectares.

347. The implementation of the jurisdictional approach will result in improved practices in the selected landscape area, while Component 3 activities will support the implementation of technologies to reduce and eliminate mercury use in the selected sites.

Reduction, phase-out, elimination and avoidance of chemicals of global concern and their residues in the environment, and in processes, materials and products

348. Technology diffusion based on models or pilots is the most recommended mechanism for transferring clean technologies in ASGM, building on the traditional knowledge transfer pathway. The two-step approach starts with the pilot approach, followed by dissemination and implementation of the technical-environmental support mechanism for replication. However, it is of utmost importance to move beyond the pilot operations phase and enter the mass dissemination phase during the life of the project. If a change is successful, a gradual self-dissemination should occur, mainly when its implementation translates into economic advantages for the ASGM operators.

349. Currently, miners do not apply any type of pre-concentration so gold recovery is less than 50%. Mercury loss occurs in the whole ore amalgamation process and when burning the amalgam.

350. The project aims to support and strengthen three (3) pilot mining areas in the processes of extraction and processing of ore according to the physical, chemical and mineralogical characteristics

of the ore to be treated, as well as the adaptation capacity of both miners/processors and their existing equipment. This will result in higher gold recovery and purity, contributing to higher revenue and financial feasibility, and hence supporting replication.

351. Different technologies will be assessed, with a focus on pre-concentrating the ore to initially eliminate whole ore amalgamation. In parallel, adequate mercury-free technologies will be introduced.

352. The project mercury reduction is calculated based on these three pilot mining areas, each with five rustic processing facilities using either rastras or tombolas. These are the most common and representative systems. Both use whole ore amalgamation with variables that affect the amount of mercury used per beneficiation (i.e., mineralogical characteristics, amounts of ore processed and working time). On average, there mercury use is estimated at 61 g per day for each rastra or tombola (Table 5). Finally, the mercury reduction calculation is based on a duration of 3.5 years considering a 6-month inception phase followed by a 12 months period to have the first mercury reduction.

353. Based on these assumptions, a mercury reduction of 3.5 tons is proposed over the project lifetime. This is a reasonable amount considering data from 2020 when 1,692 rustic processing facilities were registered nationwide with at total estimated mercury use of 35.3 tons per year.

354. The reduction of mercury use will be significantly increased if, as designed, the project can intervene in the operations with the highest production capacity, where, due to the type of process used, mercury use is certainly well above the average values used previously.

355. Mercury reduction will be monitored in each selected pilot operation, on site and based on specific control protocols and mass balances. A thorough follow-up will determine the amount of mercury used in the current process, verifying this data with the records of acquisition or purchase by the beneficiary mining organization.

356. By comparing the situation at the beginning and after the implementation of the technical-environmental measures in the beneficiation process, a pragmatic way of estimating the effective mercury reduction will be achieved.

357. In addition, due to the dissemination efforts of the GOLD+ Nicaragua project, as well as the regulatory framework, such as the strengthened national legislation, the financial mechanism to be established, the improved institutional framework, as well as extensive capacity building and awareness raising, the reduction target is expected to have a replication factor of 3 after the completion of the project. In total, the project is designed to contribute to a total mercury reduction of 14 tons.

Number of direct beneficiaries disaggregated by gender as a co-benefit of GEF investment

358. The project is expected to reach 4,840 beneficiaries (2,120 women and 2,720 men), mainly in terms of support to ASGM organizations, organization of training sessions, awareness raising and events related to the different project components. Several of these activities will be carried out in the mining communities of the selected jurisdiction, beneficiary organizations, as well as with all relevant project stakeholders.

359. The summary of beneficiaries by component is presented in Table 8.

Table 8: Number of project beneficiaries by component

Component	Men	Women
Component 1. Improvement of formalization in the ASGM sector	673	807
Component 2. Improving access to finance through financial inclusion and responsible supply chains	630	330
Component 3. Improving the adoption of mercury-free technologies	937	503
Component 4. Knowledge sharing, communication and support for local capacity building	480	480
TOTAL	2,720	2,120

360. Taking into consideration the measures indicated by the health authorities in the face of the COVID-19 pandemic, dissemination and exchange activities will be carried out in a face-to-face format when possible, generating a positive impact from the participation of ASGM miners.

g) Innovativeness, sustainability and scale up

Innovativeness

361. The project will examine and test new models of formalization, mercury reduction and financial inclusion initiatives with promising innovative aspects that could be scaled up or adopted elsewhere.

362. The application of jurisdictional approaches to drive ASGM formalization has never been adapted or applied in this sector. However, its track record in other fields and its focus on sound management of shared natural resources are well aligned to help address the many problems associated with ASGM formalization.

363. The selection of specific jurisdictions where ASGM operations coexist with other productive activities and actors is an innovative aspect of the Project and will generate significant experiences. It has the potential to be a catalyst for change.

364. The Mining Jurisdictional Landscape (PJM) is the concept used in the Project and refers to gold production areas where several mining operations (sites) are present. It corresponds to a departmental scale, which may involve one or more municipalities. It is the territorial scale in which

the participation of different actors and interests linked to ASGM activities is contemplated in order to balance competing economic, social and environmental objectives.

365. During the project inception phase, specific sites (mining operation(s)/cooperative(s)) will be selected to implement concrete actions and measures to promote greater formalization, the adoption of new technologies and the reduction of mercury use, among others.

366. The PJM pre-selection process during the project preparation phase resulted in the need to apply a two-pronged approach: (i) the integration of the four (4) project components in the piloting of the JA/SLA in a specific jurisdiction and (ii) specific activities in other ASGM areas on specific prioritized topics.

367. With regard to access to financing and responsible supply chains, there is no previous experience in the country given the dynamics of informality. The development of financial instruments that encourage banks to open up to the sector, as well as the appropriation of experiences to promote traceability and transparency in supply chains, will be crucial.

368. Finally, the gender analysis showed a high degree of lack of visibility of women miners and gender-related aspects in the sector, due to the nature of the activity and considering that it has historically been led by men. The fact that the project targets women in all its components will also be innovative in the Nicaraguan context, and it is aligned with the national legal framework promoting the active participation of women in all spaces and their involvement in decision making, including the ASGM sector.

Sustainability

369. A key aspect is the application of the jurisdictional approach, as it lays the foundation for sustainability in the selected territory. The formalization of artisanal gold mining will be integrated into community land use planning, biodiversity conservation and livelihood security, as well as obtaining greater political and stakeholder commitment. Ideally, local authorities and productive actors present in the territory should be engaged through a multi-stakeholder platform to consolidate the positive changes envisaged in the short, medium and long term.

370. This approach will build on the experience of the National Commission for Artisanal Mining (CNMA), a platform for dialogue that includes public and private sector actors, as well as ASGM representatives to develop joint strategies for the medium and long term.

371. The intervention has been designed to constantly engage stakeholders to ensure commitment, relevance and ownership, thus increasing the sustainability of project results beyond project completion. In addition, it should be supported by the coordinated and lasting strengthening of the policy framework with the objective of ensuring its durability over time. Similarly, the institutionalization of financial mechanisms will also be key to ensuring the long-term sustainability of project results.

372. In addition, the inclusion of coexistence strategies as part of the approach will support sustainability as miners will have increased access to geological data, mercury-free processing facilities and professionalization through skills transfer.

373. Finally, the sustainability of the project will be closely linked to the implementation of an appropriate knowledge management strategy. The program platform will continue to be available even after the end of the program, eventually in collaboration with the Secretariat of the Minamata Convention on Mercury and the Global Mercury Partnership.

Scale up

374. The potential for scaling up is related, among other mechanisms, to the utilization of the knowledge management repository at the program level, collating project and country information, which will continue to function after the completion of the national projects and serve as a basis for future artisanal and small-scale gold mining and processing activities in Nicaragua and other countries.

375. The results of the project and the systematization of experiences and knowledge, could also be shared with other knowledge management platforms and regional organizations (*Central American Integration System, SICA*), as well as with neighboring countries (i.e., Honduras) and thus contribute to the ASGM community at the global level.

376. If the pilot project is successful, the jurisdictional approach could be applied in other identified jurisdictions or landscapes, allowing for the replicability of experiences incorporating lessons learned on a departmental and regional scale. These exchanges are already taking place spontaneously between miners located in sites such as La Libertad and Santo Domingo and other mining districts in the country, so there is ample potential for these municipalities to serve as models and replicas.

377. Scaling up can also be obtained from regional approaches as these allow the application of interventions at scale, with a larger geographic impact. This approach will be explored in conjunction with the planetGOLD Honduras project.

378. Capacity building, awareness raising activities and exchanges between national projects are also designed to contribute to scaling up. In particular, the development and inclusion of technical curricula in academic centers, combined with competency-based certifications, will contribute to the generation of local knowledge and capacity in relevant institutions.

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[1] UNEP (2018). Global Mercury Assessment. Available here.

[2] Minamata Convention on Mercury.

[3] In agriculture, the salary can reach approximately NIO 150 per day while in ASGM activities it is between NIO 300-700 per day.

[4] The National System of Protected Areas (SINAP) of the Ministry of Environment and Natural Resources (MARENA) has nine (9) management categories: Natural Reserve, National Park, Wildlife Refuge, Biosphere Reserve, Reserve of Genetic Resources, National Monument, Protected Landscape or Seascape, Historical Monument and Biological Reserve.

[5] The worst practices according to Annex C of the Minamata Convention on Mercury are a) Amalgamation of raw ore; b) Exposed burning of amalgam or processed amalgam; c) Burning of amalgam in residential areas; and d) Leaching of cyanide in sediments, raw ore or rocks to which mercury has been added without first removing the mercury.

[6] MARENA (2019). Causes of Deforestation and Forest Degradation in Nicaragua. Available here.

[7] Wickre JB, Folt CL, Sturup S, Karagas MR. Environmental exposure and fingernail analysis of arsenic and mercury in children and adults in a Nicaraguan gold mining community. Arch Environ Health. 2004;59(8):400-409.

[8] Ministry of Environment and Natural Resources, (MARENA) (2020). Guide for the management of Biodiversity. Available here.

[9] UN Biodiversity Lab, 2022. Available here.

[10] Fragmentation of biological corridors refers to the process created by deforestation that gradually reduces the forested areas to isolated tree islands negatively affecting the wild fauna?s ability to move freely around the ecosystems.

[11] PPG team, 2022

[12] PPG team, 2022

[13] Interviews conducted during PPG: UNAN-MANAGUA (May 2022); UNI (May 2022), MINSA (March 2022), INATEC (March 2022) and MINED (2022).

[14] Bill on Amendments and Additions to Law No. 387, Special Law on Exploration and Exploitation of Mines (23 August 2022). Available here.

[15] Article 40. Law 387 Special Law on Exploration and Exploitation of Mines (2001). Available here.

[16] Decree 119-2001. Rules on Law 387, Special Law on Exploration and Exploitation of Mines. Available here.

[17] Article 41. Law 387 Special Law on Exploration and Exploitation of Mines (2001). Available here.

[18] Article 42,43. Law 387 Special Law on Exploration and Exploitation of Mines (2001). Available here.

[19] Article 47. Law 387 Special Law on Exploration and Exploitation of Mines (2001). Available here.

[20] Decree 76-2006. Environmental Assessment System. Available here.

[21] Decree 20-2017. Environmental Evaluation System of Permits and Authorizations for the Sustainable Use of Natural Resources. Available here.

[22] Law No. 387 "Special Law on Exploration and Exploitation of Mines" and its Decree 119-2001, whose text with all its consolidated amendments are contained in Law No. 1045, "Law of the Nicaraguan Legal Digest of the Energy and Mining Sector" as of November 11, 2020 and published in the Official Gazette No. 130 of July 14, 2021.

[23] Law 40. Law on Municipalities (2013). Available here and Law 28. Statute of Autonomy of the Regions of the Caribbean Coast of Nicaragua (2016). Available here.

[24] The cooperative associates are partially included in the registry of miners.

[25] MEM, 2022

[26] PPG team 2022

[27] HEMCO NICARAGUA S.A. 2022

[28] Plantel Los ?ngeles 2022

[29] PPG team

[30] Resource Trade Earth. Available here.

[31] CAMINIC (2021). Analysis of Mining Activity in Nicaragua. Available here.

[32] CNRCST 2021

[33] MEM 2022

[34] Law N.28. "Statute of Autonomy of the Regions of the Caribbean Coast of Nicaragua" with its incorporated reforms. Avaialble here.

[35] Convention on Indigenous and Tribal People, 1989. Available here.

[36]URACCAN (2019). Indigenous peoples and Afro-descendants of Nicaragua/Ethnography, natural ecosystems and protected ?reas. Avaiable here.

[37] URACCAN (2019). Indigenous peoples and Afro-descendants of Nicaragua/Ethnography, natural ecosystems and protected ?reas. Avaiable here.

[38]Level 2 trainings will include pre-interviews and surveys conducted by global experts to identify interests, needs and priority opportunities so that a tailored curriculum can be developed. The trainings will last between 4 and 6 hours and will be delivered through virtual platforms. Following these trainings, experts will prepare reports with recommendations for each national program on how to move forward on the respective topic.

[39] Cooperativa de Ahorro y Cr?dito La Cuatro R. L. (103 members); Cooperativa de Peque?os Mineros El Jabal? R. L. (30 members); Cooperativa de Peque?os Mineros de Santo Domingo R. L. (227 members); and Cooperativa de Producci?n Minera El Cafetal Dios Con Nosotros R. L. (49 members).

[40] Intersectionality can be defined as "the interconnected nature of social categorizations such as race, class and gender, seen as creating overlapping and independent systems of discrimination or disadvantage." Source: Oxford Dictionary.

[41] The planetGOLD Criteria are a branched version of the CRAFT Code, published by the Alliance for Responsible Mining (ARM).

[42] PlanetGOLD (2021). Best management practices for cyanide use in the small-scale gold mining sector. Available here.

[43] UNEP/MC/COP.4/INF/6 - Guidance document on the management of artisanal and small-scale gold mining tailings. Available here.

[44] During the first phase of the PlanetGOLD program, a global knowledge platform was created. The website (planetgold.org) presents and connects all country projects under the umbrella of the program and brings together information, products and tools organized according to the program's knowledge areas.

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

379. The project recommends piloting the activities in three different areas: (i) La Libertad, (ii) Santo Domingo and (iii) Santa Rosa del Pe??n (note: the jurisdictional approach is recommended to only be piloted in Santo Domingo).

380. These areas will be confirmed during the inception phase of the project. Two maps have been included in Figure 13 and Figure 14.

381. The coordinates are: La Libertad (UTM: 16P 699628.155 1351031.187); Santo Domingo (UTM: 16P 657681.211 1272985.049); and Santa Rosa del Pe??n (UTM: 16P 568414.922 1415203.441).

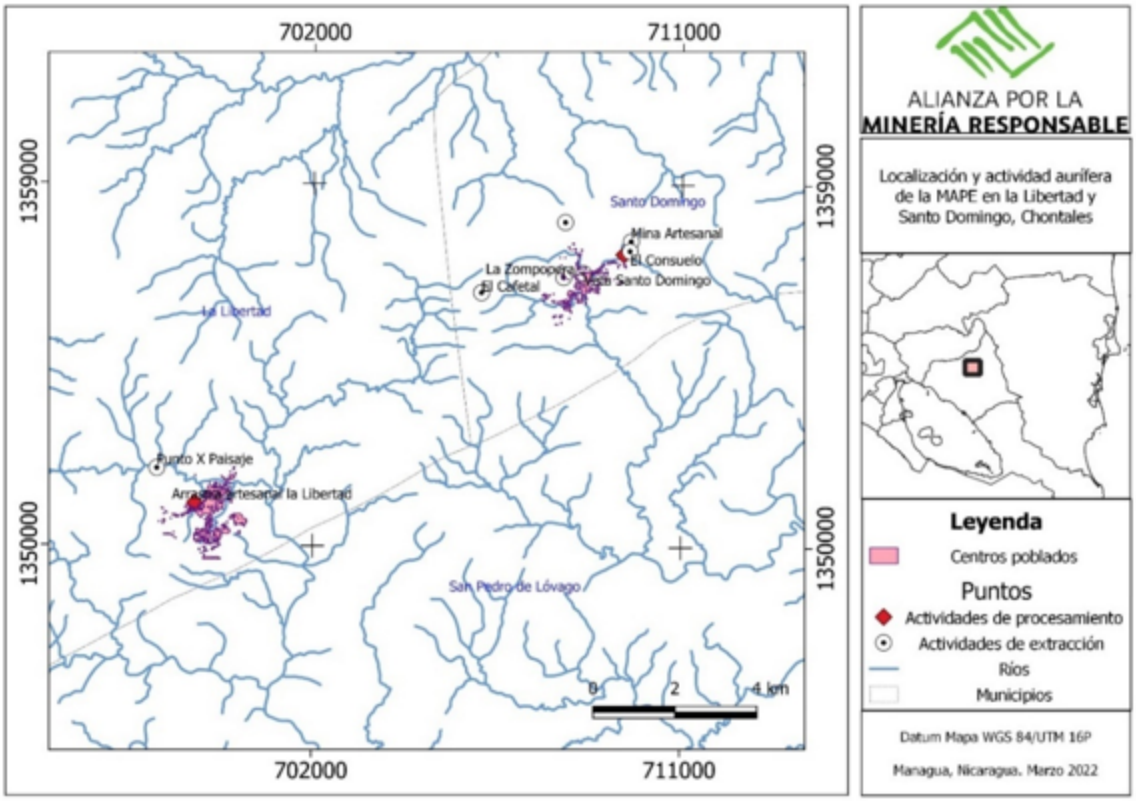

Figure 12: Map of project location(s) in Santo Domingo and La Libertad

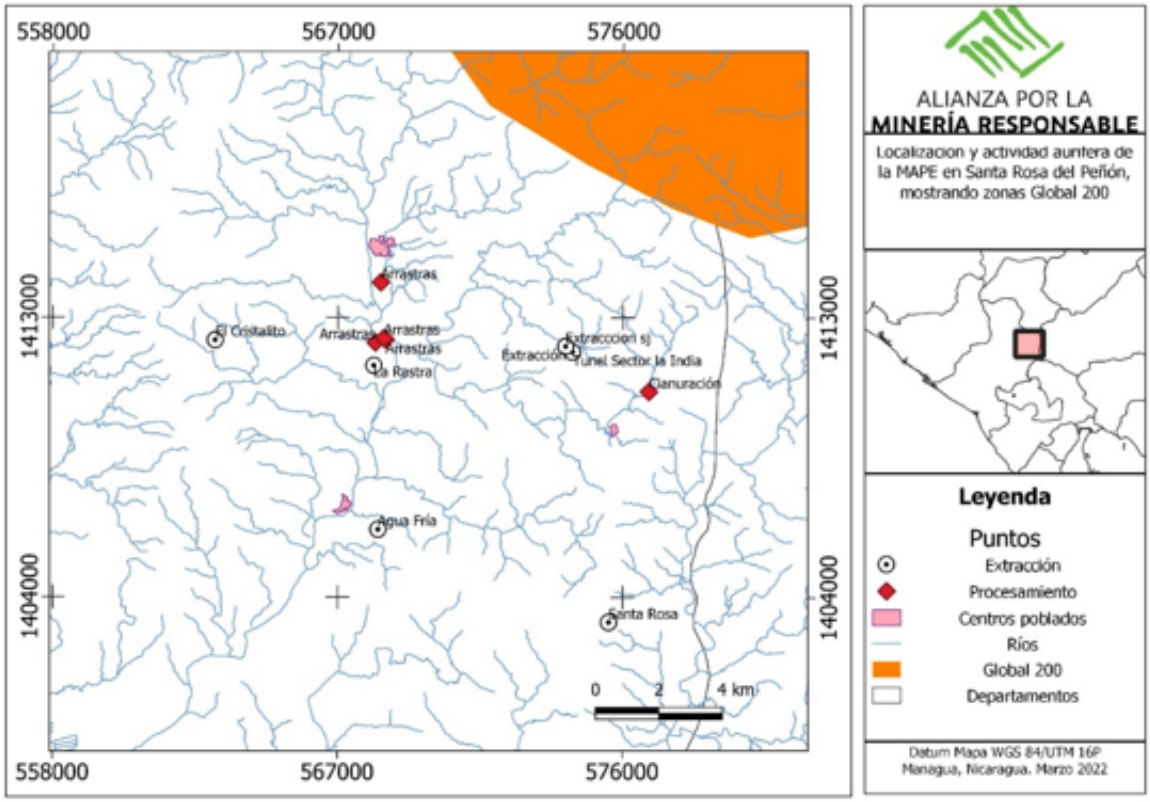

Figure 13. Map of project location(s) in Santa Rosa del Pe??n

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

382. Nicaragua is one of the countries participating in the GOLD+ programme, second phase of the planetGOLD program (GEF ID 10569).

383. The integrated approach proposed for the Nicaragua child project fully responds to and reflects the planetGOLD Programme?s ToC as can be deduced from the child project results framework. All child project components fully align with the programme components, and the child project outputs directly contribute to the PFD and outcomes as described in the project?s results framework. As such the proposed child project proposes suitable and appropriate options to tackle systematic challenges for countries where the ASGM sector is a more than significant source of mercury pollution and environmental harm.

384. In this sense, the Nicaraguan child project will analyze and make recommendations on policies needed and strengthen the capacities of institutional actors and miners to promote greater formalization of the sector at the national and local levels. It will test innovative financial mechanisms, including a specific mechanism targeting women miners, while strengthening the knowledge of government officials, financial entities and independent miners on the ASGM sector's financing

opportunities and needs. Finally, the project will test technologies that use less or no mercury for more profitable and/or environmentally safer gold recovery, adapted to local circumstances and with potential for replication for other areas of the country.

385. The country project will contribute to the results of the program as a whole, in particular to the global environmental benefits to be achieved, enhancing environmental management and compliance of the ASGM sector.

386. It will coordinate closely with the global project on coordination, knowledge management and outreach. Information will be provided upstream to the program and downstream for systemic branding and reporting on project results. Exchange of information and sharing of best practices will be ensured with the planetGOLD child projects in Colombia, Bolivia, Ecuador, Honduras, Peru, and Suriname. This will enable the lessons and knowledge generated to be made available and used by subsequent initiatives focusing on ASGM.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities Yes

If none of the above, please explain why:

387. During the project preparation phase, key stakeholders have been identified, engaged and consulted based on an initial matrix established. This initial stakeholder matrix is a basic tool for planning stakeholder engagement.

? Public sector institutions

- Municipalities
- National Water Authority (ANA)
- Production Development Bank (*Banco de la Producci?n*)
- Export Processing Center
- National Commission for the Control and Registration of Toxic Substances (CNRCST)
- National Forestry Institute (INAFOR)
- Nicaraguan Institute of Territorial Studies (INETER)

- Regional Governments
- Ministry of Environment and Natural Resources (MARENA)
- Ministry of Family, Community, Cooperative and Associative Economy (MEFCCA)
- Ministry of Energy and Mines (MEM)
- Ministry of Development, Industry and Commerce (MIFIC)
- Ministry of Women (MINIM)
- Ministry of Family (MIFAM)
- Ministry of Education (MINED)
- Ministry of Youth (MINJUVE)
- Ministry of Health (MINSA)
- Ministry of Labor (MITRAB)
- Secretariat of Natural Resources and Environment (SERENA)

? Civil Society Organizations (CSOs) / Non-Governmental Organizations

? International entities and organizations

- planetGOLD child projects and global project

? Private sector

- Mining Chamber of Nicaragua (CAMINIC)
- Industrial mining companies
- Financial institutions (Banco Avanz, Banco BAC, Banco de Finanzas, Banpro, Banco Lafise, Financiera Fundeser, Grupo Financiero FICOHSA, others)
- Industrial plants (*planteles*)

? Academia and research centers

- Autonomous University of Nicaragua (UNAN)
- Center for Research of Aquatic Resources (CIRA)
- National Council of Universities (CNU)

- National Engineering University (UNI)
- National Technological Institute (INATEC)
- University of the Autonomous Regions of the Nicaraguan Caribbean Coast (URACCAN)

? Mining sector

- Mining cooperatives
- Informal groups and independent miners
- Owners of rustic mining processing systems

? Indigenous people and afro-descendants (*pueblos originarios y afrodescendientes*)

388. The main interactions with stakeholders during the preparatory phase can be summarized as follows:

? 1 initial workshop that gathered 85 participants (39 women and 46 men) and 1 validation workshop that gathered 39 participants (21 women and 18 men);

? 1 online survey form (4 responses from different entities);

? 16 testimonies from women miners, 21 surveys of miners and 19 interviews with miners on gender-related issues;

? 7 interviews for the assessment of access to ASGM financing in Nicaragua;

? 7 participatory workshops and 17 meetings with public sector institutions;

? 3 participatory workshops and 13 interviews with private mining companies;

? 25 interviews with miners, 11 focus groups with miners and 5 field visits;

? 4 interviews with civil society organizations; and,

? 2 focus groups with leaders and members of indigenous and afro-descendant communities.

Please provide the Stakeholder Engagement Plan or equivalent assessment.

389. A stakeholder engagement plan was prepared to identify key stakeholders, their corresponding mandates, roles in the project, linkages related to GOLD+ components, period of involvement, spatial scope, and an approximation of potential investments or contributions (see Annex H Stakeholder Engagement Plan).

390. The plan includes, exhaustive but generic identification of the different stakeholders related to the ASGM sector and the gold value chain, as well as those who play a role in its accompaniment and oversight. An assessment of stakeholder interests and potential influences is also presented, as well as a graphical representation that allows all stakeholders to be classified into four generic forms of relationships to be adopted within the framework of the project vision vis-?-vis these stakeholders.

391. The diversity of stakeholder groups means that there are different interests, levels of education about the ASGM sector, cultural norms and values. Therefore, different approaches should be used to communicate with different stakeholders. Local communities and other economic actors in the selected jurisdiction will also be involved in integrated land-use planning, development of roadmaps and monitoring plans.

392. The program will support country projects to align their stakeholder engagement plans with the program strategy.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

393. Table 9 presents a list of key stakeholders and suggested roles and responsibilities, mechanisms, activities and outputs for appropriate project engagement. Women will be targeted transversally across all categories and sex-disaggregated data will be collected to understand how women and men are involved in the project activities.

Table 9: Main stakeholders and participation mechanisms

Objective	Roles and responsibilities	Stakeholders	Mechanisms	Activities	Results

Public sector National, regional and local	Contribute to the proper execution of the project on the basis of public policies and compliance with regulations and laws	Focal points from the public sector, relevant ministries and local governments	Technical committees, direct interaction	Provide information and periodic technical assistance to increase public sector knowledge capacity to identify, generate, manage and implement actions to support formalization and reduction of mercury in ASGM	The authorities, civil servants and representatives of the public sector are informed of progress and possible opportunities for change, mainly in the area of public policy
Civil society National and regional	Generate synergies with the project to help join efforts and economic resources.	Institutions that carry out activities similar to the project's objective and components, as well as gender equality and women's empowerment	Events, workshops, symposiums, audiovisual materials and/or knowledge sharing, communications, direct interaction	Exchange information and build capacity through brochures, reports, studies, surveys, research and others CSOs/NGOs can contribute to the elaboration of knowledge products	Executives and technical staff of civil society support organizations have all the means and information to enhance synergies

International organizations and entities International and regional	Information sharing and knowledge generation for replication of positive results	International organizations carrying out similar activities in other countries or supporting similar programs in Nicaragua Other planetGOLD projects, incl. global project	Events and knowledge-sharing centers	Exchange of information through reports, studies, research, etc.	Staff can share results and best practices for replication and generate opportunities for synergies
Private sector International and national	Implement investments or business plans that benefit the project and help implement more efficient technologies.	Industrial mining companies / industrial plants Gold buyers and financiers, investors, banks, technology providers, other private sector entities	Meetings, workshops and events Direct interaction	Exchange information and analyze business plans/strategies that can contribute to generating alternative and more efficient technologies and more responsible supply chains.	Executives and representatives of private sector companies learn about the Project's work and are able to analyze business opportunities.
Academia and research National and regional	Contribute professionals, research, laboratories and others from academia to support the planned changes.	Universities, technical training centers and research centers	Courses, workshops, materials, studies	Conduct and exchange reports and studies related to technological processes and other aspects relevant to building a responsible ASGM sector, contribute to strengthening ASM technical capacities	Academic staff are able to share their research and findings and are aware of advances in technological processes and other aspects relevant to building a responsible ASGM sector.

Mining sector National and local	Proactively engage and inform the grassroots of the mining cooperative/individual miners about the impacts of the project for a permanent openness to change.	Mining cooperatives, collectives and independent miners	Assemblies, symposiums, consultations, workshops and other media (radio)	Organize regular meetings and prepare brochures and reports for the dissemination of information, project progress and other relevant elements	Mining leaders from cooperatives and independent groups can share their needs and concerns and learn about the progress of the project to generate engagement and improve outreach.
Indigenous people and afro-descendants Local	Participate proactively and inform and consult its members about the project	Indigenous peoples, afro-descendants	Meetings, consultations	Report on activities carried out and provide a space for dialogue and consultation	Community, afro-descendants and indigenous peoples' representatives are able to make suggestions, consult and raise concerns, and are kept abreast of project work
General public	Information sharing and knowledge generation for replication of positive outcomes	General public	Consultations, workshops, Implementation of communication strategy	Generate a positive attitude change through value formation on key aspects of the ASGM sector and project progress	The general public is aware of the positive results of promoting responsible artisanal gold mining

Select what role civil society will play in the project:

Consulted only; Yes

Member of Advisory Body; Contractor;

Co-financier;

Member of project steering committee or equivalent decision-making body;

Executor or co-executor;

Other (Please explain)

394. At programme level, an Accountability and Grievance Mechanism (AGM) has been developed that describes how all stakeholders will be able to submit grievances and how these will be processed. To ensure that stakeholders are aware of and can access the grievance mechanism: (i) a grievance form will be created on the planetGOLD website in multiple languages; (ii) links to the grievance form will be added throughout the planetGOLD website; (iii) a link to the grievance form will be included in planetGOLD's knowledge products; and (iv) the project will allow for the submission of anonymous grievances. In addition, the key information on the AGM will be communicated as part of the Stakeholder Engagement Plan and the Environmental and Social Management Plan (ESMP).

395. To ensure that the AGM operates effectively and efficiently, the AGM will treat all complaints confidentially and objectively, to provide those with complaints with a safe space to voice them. The AGM has established timeframes for responding to complaints. Compliance with these timelines will be monitored as part of project monitoring and evaluation. The AGM establishes the processes for complaints handling by the project and which complaints are admissible. The AGM will be hosted on the planetGOLD website and administered by UNEP.

396. If grievance resolution is not possible at the program level, UNIDO encourages the use of the UNIDO grievance mechanism detailed in the Environmental and Social Management Plan.

397. The Project Executing Unit will be notified and will be responsible for addressing the issue in accordance with UNIDO's Environmental and Social Safeguards Policy.

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

398. Gender equality and women's empowerment have a positive impact on sustainable economic growth and inclusive industrial development, which are key drivers of poverty reduction and social progress.

399. During project implementation, gender mainstreaming will be based on the GEF Gender Equality Policy and the UNIDO Policy on Gender Equality and Women's Empowerment.

400. UNIDO recognizes that both men and women play a wide range of roles in the primary and secondary economies of artisanal and small-scale gold mining, especially when operating in an enabling environment and when equipped with the right skill set. The project will provide alternatives

to existing rules that currently limit the range of employment opportunities for women and men in the primary and secondary ASGM economies.

401. The project also recognizes the gender dimensions of mercury use and exposure risks in ASGM, as women often perform some of the tasks most exposed to the toxic substance.

402. ASGM in Nicaragua has traditionally been a male-dominated sector. There are estimates suggesting that 15-20% of women work in the sector, although there is a general lack of data and information on gender-related aspects.

403. Women are typically involved in mining activity in three ways: a) as members of cooperatives; b) as members of independent groups of 5-6 people; or c) as day laborers averaging 12 hours per day with an income of approximately USD 7 per day.

404. During the preparatory phase, a gender analysis was conducted, mainly analyzing roles, needs, rights and responsibilities, division of labor, access to resources and other relevant aspects in the workplace, household and community in several municipalities (La Libertad, Santo Domingo, Santa Rosa del Pe??n, El Rama - Kisilala).

405. The main results of the gender analysis (Annex I) are as follows:

? There is participation of women working in ASGM both in extraction roles, although in a more limited way, and in the processing of gold ore according to the group where they are located;

? Women in ASGM in Nicaragua suffer an unfavorable situation due to socio-cultural and economic aspects;

  ? Access to education, employment and resources and the distribution of work is generally unequal between men and women, while the representation of women miners and their work tends to be less visible;

  ? Women who have invested in establishing mining profits, mostly together with their partners, are those who have achieved greater autonomy and decision-making power while women who do shift work are generally single mothers who allocate their income to cover basic household needs and find themselves in situations of greater vulnerability and dependence;

  ? The majority of women consulted during the field visits have experienced discrimination and gender-based violence to varying degrees;

  ? The majority of women miners suffer from the double burden of work (i.e., mining work and domestic chores);

  ? Most women operating in ASGM are in lower income groups with limited access to loans and/or financing and little mining experience which creates barriers to resource management and entrepreneurship;

? There is no knowledge or skills in alternative techniques to the use of mercury to process gold among women, although there is great interest and openness to new learning and training;

? There are no alliances or women's organizational networks in the municipalities visited due to a lack of social cohesion around the challenges affecting women and their families in the sector; and,

? The participation of women's groups in the communication and participation mechanisms of public institutions should be enhanced and promoted.

406. Public institutions have an important role in the empowerment of women in decision making and their participation in communication spaces, and this should be promoted at all levels.

407. Working on gender equality and women's empowerment will primarily have a positive impact on economic growth, contributing to strengthening the government?s model in its national plan to fight poverty and to contribute to human development. In addition, the empowerment of women's groups can have a very beneficial impact on strengthening community responses to unsafe ASGM practices.

408. Based on the preliminary assessment and following the four main components of the project, strategic lines of action were defined in the Gender Action Plan (Annex I).

409. The Gender Action Plan has been designed to ensure the active and meaningful participation of women and men, equal access to opportunities, resources and benefits of the project, and avoid perpetuating social inequalities in the following strategic lines:

? Women's capacities to exercise their rights are strengthened and actions towards formalization, gender equality and women's empowerment are generated;

? Women's entrepreneurial and financial capacities are strengthened and financial mechanisms and alternative livelihoods are introduced for women miners;

? Women's capacities are strengthened on mercury use and alternative technologies and practices; and,

? Women's capacities and skills are strengthened to influence the visibility of their rights, communication, and knowledge generation.

410. Gender perspectives will be captured, including the collection of baseline data documenting risks and opportunities for men, women, elders, boys and girls, or local traditional communities and indigenous peoples and afro-descendants affected by the project.

411. In addition, collaborations and synergies will be explored with actors at the regional and international level such as the Network of Women Miners in Latin America or the Working Group on Women and Mining (IWIM), especially in terms of knowledge management on gender aspects in mining.

412. The project will integrate gender equality and women's empowerment into all project components, ensuring that formalization efforts, access to finance and responsible markets, and access to mercury-free technologies benefit both men and women. Capacity building of ASGM actors will target both men and women through training and skills transfer.

413. In addition, the strategies proposed in the Gender Action Plan have been integrated into the project's logical framework, which translates into specific outputs and activities (targeting at least 40% of women) and disaggregated by sex and gender information for gender-sensitive monitoring and evaluation.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?

Yes
Closing gender gaps in access to and control over natural resources; Yes

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

Does the project?s results framework or logical framework include gender-sensitive indicators?

Yes
4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

414. In Nicaragua, Law 387[1] states that, within a mining concession, the area allowed for ASGM shall not exceed 1% of the total concession. The concession owener must inform and notify the Ministry of Energy and Mines for control and monitor in coordination with the Ministry of Environment and Natural Resources.

415. This results in large mining companies coexisting with artisanal mining throughout the national territory. As previously mentioned, the main mining companies are HEMCO NICARAGUA S.A. of Colombian capital; Desarrollo Minero de Nicaragua DESMINIC S.A. and Trit?n Minera S. A. of Canadian capital; Mako Mining, S.A. of Canadian capital and Condor Gold of British capital that expects to extract gold in the coming months.

416. Throughout the project, exchanges and joint activities will be promoted with these companies to generate interest and awareness of the importance of responsible ASGM, sustainability and corporate social responsibility.

417. The fact that most companies have ASGM programs in place is indicative of their willingness to support the adoption of technological innovations and environmentally sustainable practices.

418. Regarding component 2 and access to finance, the involvement of the financial sector will be promoted by raising awareness of the opportunities in the ASGM sector and providing incentives for the financial entities and insurance companies to engage with miners and offer financial products and services that respond to the needs of the ASGM sector.

419. In terms of responsible supply chains, private sector involvement will be mainly linked to industrial sites that purchases ore from ASGM and local intermediary companies that deal with gold commercialization in the country, as well as international buyers and users that might be interested in buying responsible gold. These plants could be involved as potential drivers of technological change to ensure responsible practices and local capacities are in place. This could be an essential vector for mercury use reduction.

420. Engaging and engaging local gold traders and informal financiers will be particularly difficult, as these companies prefer to keep a low profile in their activities and relationships due to the high sensitivity and nature of the sector. However, their involvement is important to achieve increased traceability and transparency and successful ways of engaging these specific actors will be explored, mainly at the local level.

421. International refiners, jewelers and electronics companies will be informed about the ASGM sector in Nicaragua and relevant data related to project progress and milestones through the Program Advisory Group (PAG) meetings and reports to the program. Information on the gold sourcing due diligence programs implemented by these actors will also be shared with the gold mining cooperatives to raise awareness on the importance of responsible ASGM.

422. There are also potential linkages with equipment and machinery suppliers. The project will actively target these actors to generate awareness on cleaner and more efficient technologies or how to use equipment and machinery for a more responsible mining sector. Win-win schemes where equipment suppliers provide appropriate technologies along with capacity sessions on operation and maintenance in exchange for purchase and use by miners promoting environmentally responsible management plans in their operations.

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[1] Article 43, Chapter V, Special Law on Exploration and Exploitation of Mines (2001). Available here.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

423. Table 10 presents the main risks and mitigation measures proposed for the project.

Table 10: Risks for the project

Risk	Probability	Impact	Mitigation measures
COVID-19 Risks			
Pandemic-related roadblocks/restrictions affect project activities	Low	Medium	Constantly monitor restrictions at different levels (national, municipal levels (national, municipal) Opt for remote interaction for some of the project activities, and prepare and implement contingency plans for on-site activities
Project activities pose an increased risk of infection to the project team and project beneficiaries	Low	Low	Implement health awareness activities and biosafety protocols COVID-19
Climate Change Risks [1] / Environmental Risks			
Weather phenomena affect mining operations and/or project activities	Medium	High	Conduct a climate change risk and vulnerability analysis. analysis of the vulnerability to climate change of selected sites, avoiding areas with severe risks of catastrophic events due to unsafe mining conditions Planning activities taking into account dry and rainy seasons and their impact on mining operations Monitor climate information regularly based on Early Warning Systems (EWS) and support the development of disaster response plans together with SINAPRED
Deforestation and biodiversity loss increase due to mining activities	Medium	Medium	Develop and implement progressive land restoration plans supported by the jurisdictional approach to landscape management

Generation of waste from ASGM activities into the environment	Low	Low	Ensure that the environmentally sound management plans for generated waste at selected sites at selected sites Train miners on recycling and good housekeeping practices
Generation of smoke and other atmospheric pollutants from ASGM mining operations, equipment, and vehicles	Medium	Low	Preventive maintenance of fuel-powered equipment and machinery Promote the changeover to electric equipment and clean energy sources
Operational Risks			
Lack of coordination and articulation among multiple stakeholders (public sector, private sector, and NGOs)	Medium	High	Establish an implementation mechanism with established roles, functions and deliverables to be achieved Ensure broad participation of all stakeholders within the project Ensure regular communication between key stakeholders
Migration of miners following the depletion of gold ore, threatening the long-term stability and livelihoods of rural communities	Medium	Medium	Consider the presence of alternative livelihoods, as well as a baseline estimate of gold reserves to ensure the medium to long term life of the mine life for site validation The application of jurisdictional approaches and of mercury-free technologies could lead to social and environmental improvements for the community
Social Risks			
Prevailing cultural norms and practices (negative views of outsiders, resistance to change) impede project activities and/or behavioral changes in mining activities	Medium	Medium	Conduct cultural orientation, consultation and miner-miner interactions In addition, a system of awareness and incentives will be created to motivate bi-directional behavioral changes in behavior (for the project team and for the miners)

Presence of child labor in the selected mines selected mining sites	Medium	High	Monitor and ensure that child labor does not take place in mining activities in the selected sites
Displacement of women and vulnerable groups due to technological changes	Medium	Medium	Conduct a gender impact assessment and corresponding mitigation measures to avoid the risks of exclusion
Loss of jobs for mercury brokers and suppliers lead to threats and/or criminal activities	Medium	High	Assess the risks related to life cycle mercury trade and provide job opportunities in the formalized gold supply chain for intermediaries
Potential impact on indigenous peoples and afro-descendant communities (IP) directly or indirectly involved in mining/processing	Low	Low	Recommended work area does not overlap with IP and afro-descendants territories Consultation with IPs; possible development of an environmental and social impact assessment (ESIA)
Technical Risks			
Limited willingness of financial institutions to coordinate and implement financial products targeted at ASGM	Medium	Medium	Prioritize work agendas on specific topics Use communication strategies that promote the importance of stakeholder concurrence and the importance of financial mechanisms and opportunities in the ASGM sector
Low interest of miners in technical aspects and difficult accessibility of the site	Medium	Low	Employ qualified experts (local and international) to provide training and then provide practical guidance using accessible and understandable information Promote peer learning throughout the project In terms of accessibility, the pre-selection of sites, together with adequate budgeting, organization of transportation and communication support mechanisms, can help to ensure accessibility

424. A detailed analysis of the different risks of the project is presented in the Environmental and Social Management Plan (ESMP), which is included in Annex K.

425. It is important to note that, if required, the risk analysis will be adjusted when more information becomes available during project implementation.

426. In addition, the project team will ensure that all planetGOLD beneficiary mining entities conform to the planetGOLD Criteria for Environmentally and Socially Responsible Operations through review of the planetGOLD Environmental and Social Risk Assessment Report and Mitigation Report.

COVID-19

427. The COVID-19 pandemic had limited economic impacts in Nicaragua as moderate containment measures were implemented and mostly limited to preventative recommendations.

428. Land borders with neighboring countries applied restrictive measures but were not closed. Nevertheless, the country has faced strong waves of contagion, which has had an impact in terms of loss of life.

429. As of June 2022, Nicaragua had a total of more than 14,721 infections and 243 deaths. More than 5,555,994 vaccines were administered and 83.9% of the population is fully vaccinated[2].

430. The impact of the COVID-19 pandemic must be carefully considered for project implementation, especially in light of the new strains.

431. In the mining sites visited during the preparatory phase, miners stated that during the pandemic, mining operations continued as normal without employing prevention measures among workers due to the low level of officially reported infections and the general lack of knowledge about the pandemic.

432. Restrictions on face-to-face meetings are not likely to affect project implementation in terms of activities requiring travel to the field, as the institutions have taken appropriate health measures, accompanied by a program made available by MINSA to ensure that people are vaccinated against COVID-19. The situation will be closely monitored throughout the project life cycle, and a contingency plan based on the risks identified above will be refined during the inception phase and updated periodically during the life of the project.

433. The project foresees the introduction of digital solutions that can build technological capacity to bridge the digital divide; support livelihoods and job creation in the artisanal and small-scale gold mining sector; and capacity building of mining cooperatives and individual miners to safely manage hazardous waste, including the use of personal protective equipment that safeguards miners from health impacts, including those related to COVID-19.

434. COVID-19 has dramatically increased the use of single-use plastics and other materials that are part of personal protective equipment. Macro and microplastics can carry invasive alien species that can form a new habitat and increase the likelihood of disease outbreaks, which is higher in tropical regions such as parts of Nicaragua[3].

Opportunities to support COVID-19 response

435. Finally, the COVID-19 pandemic not only generated a crisis, but also presented an opportunity to build a new, more egalitarian, inclusive and just framework. By rebuilding a sustainable

development perspective within the productive sectors, including artisanal gold mining and small-scale gold mining, it is essential to protect nature.

Opportunities to support short-term response to COVID-19

436. The project could be leveraged to improve public health awareness at mining sites, based on the Rapid Health Assessment in the ASGM sector generated as part of the development of the country?s NAP.

437. In addition, targeted assistance programs for vulnerable groups, including migrant, indigenous, and women miners of different age groups.

Opportunities to support long-term response to COVID-19

438. The transformation of artisanal gold mining, one of the main polluting sectors in Nicaragua, can bring significant benefits for biodiversity and ecosystems, as well as for the health of miners and their communities.

439. The project will test the sustainable landscape approach/jurisdictional approach that will promote responsible land uses that should limit deforestation and reduce human-wildlife contact, which will have an impact on the overall protection of natural capital.

440. In addition, the project will provide an opportunity to strengthen artisanal gold supply chains in the country, while increasing the natural and economic resilience and adaptive capacity of targeted communities.

441. Ecological recovery measures will be promoted not only for ASGM, but also for other highly polluting sectors in the country.

Climate change

442. Nicaragua is one of the countries with the least negative contribution to climate change, as its greenhouse gas emissions are very low, estimated at around 0.02% of total emissions[4]. However, it is the sixth most vulnerable country to climate change[5] as it is located in one of the regions most threatened by climate variability.

443. It is exposed to a series of events related to natural climate variability, such as the El Ni?o and La Ni?a phenomena, monsoon-related events in the Pacific, tropical hurricanes, among others. These generate serious threats, including droughts, floods, landslides, water shortages and the destruction of crops, forests and homes.

444. The country has a tropical climate with little seasonal variation in temperature, which ranges between 21 and 27 C and two distinct seasons: a wet season between May and October and a dry season between November and April (Figure 15).

445. From July to October, the country is subject to more intense rainfall and strong winds. El Ni?o fluctuations during June and August bring relatively warmer and drier or cooler and wetter conditions respectively.

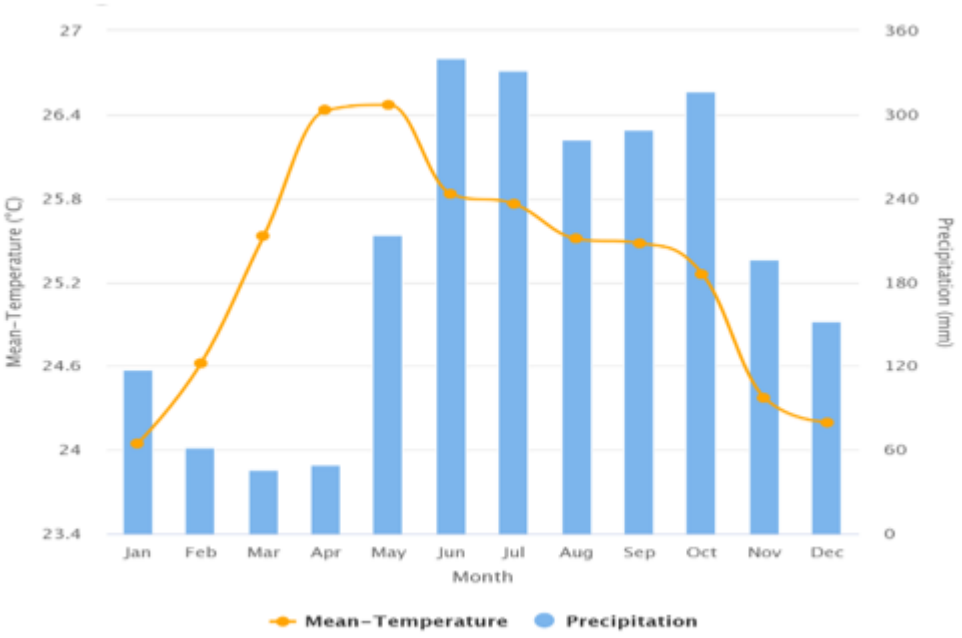

Figure 14: Average monthly temperature and precipitation from 1991 to 2020. Source: World Bank Group, 2022

446. MARENA's climate change projections under the UN Framework Convention on Climate Change project increases in average temperature ranges between 1-2? C for the period 2020-2050. It also projects a generalized decrease in rainfall and an increase in the unpredictability of rainfall patterns, and an increase in the increase and severity of natural disasters, particularly hurricanes and floods.

447. Among the main vulnerabilities to climate change in Nicaragua are:

? Droughts: the departments most at risk are located in the Pacific and Central region whose vulnerability may increase due to the presence of specific meteorological phenomena such as El Ni?o.

? Floods: the autonomous regions of the Caribbean Coast and the department of R?o San Juan are the territories with the greatest exposure to this type of disaster due to the direct effects of hurricanes. In addition, they are highly vulnerable due to the fragility of infrastructure, proximity to rivers and watercourses or coastal areas.

? Landslides: the territories with the highest level of exposure and risks are in the central region of the country due to the location of mountainous areas and proximity to natural watercourses.

? Forest fires: these risks have been identified throughout the country and may be increased by the presence of meteorological phenomena. The areas with the highest incidence are the western Pacific, Central and Northern Caribbean Coast Autonomous Region.

448. In the Environmental and Social Management Plan (ESMP), vulnerability to certain events (droughts, floods, forest fires and landslides due to precipitation) has been analyzed in the different areas visited during the preparatory phase (Table 11).

Table 11: Climatic aspects in the areas visited

Climatic aspects	Mining areas visited			
	La Libertad	Santo Domingo	Santa Rosa del Pe??n	El Rama-Kisilala
Climatic sub-regions	Central Pacific Region	Central Pacific Region	North Region	South Caribbean Region
Climate	Tropical savanna	Tropical savanna	Tropical dry	Tropical humid
Average annual temperature	22-24 C	22-24 C	26-28 C	24-26 C
Average annual precipitation	1400-1800 mm (sub-humid)	1400-1800 mm (sub-humid)	1000-1400 mm (semi-dry)	3500-4000 mm (humid)
Climate change vulnerability	Medium	Medium	High	Medium
Drought events	Yes	Yes	Yes	Yes
Flood events	Yes	Yes	No	Yes
Forest fire density (0-1,700)	0	0	50	25
Precipitation landslide events (0-1,000)	0	0	1-30	0

[1] The climate change risks were elaborated based on information from the Climate Change Knowledge Portal. Available here.

[2] John Hopkins University (2022). Coronavirus Resource Center: Nicaragua. Available here.

[3] Secretariats of the Basel, Rotterdam, Stockholm (BRS) and Minamata Convention on Mercury (2021). Interrelationships between Multilateral Environmental Agreements on Chemicals and Waste and Biodiversity: Key Insights. Available here.

[4] Emissions Database for Global Atmospheric Research (EDGAR). Available here.

[5] German Watch (2017). Global Climate Risk Index. Available here.

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

449. The following section describes the institutional arrangements for project implementation, as well as programmatic interaction. The last part of the section details the planned coordination with other initiatives, including those financed by the GEF.

Project level execution

450. As requested by the Government of Nicaragua on April 04, 2022, the project will be executed by UNIDO. In line with the Minimum Fiduciary Standards for GEF Partner Agencies, the project implementation oversight and execution duties will be part of two separate directorates: (i) Directorate of Technical Cooperation and Sustainable Industrial Development (TCS) and (ii) Directorate of SDG Innovation and Economic Transformation (IET).

451. An Implementation Project Manager (IPM) will be responsible for project implementation, while an Execution Project Manager (EPM) will be in charge of project execution to ensure a strong internal segregation of roles and responsibilities within UNIDO.

452. The institutional arrangements, as well as a description of the roles and responsibilities of the different agencies are described below and summarized in Figure 15:

? A **Project Steering Committee (PSC)** will be established to provide overall direction, oversight and guidance on project implementation, making critical decisions on strategic issues. This body will also ensure timely delivery of project outputs and eventual achievement of project outcomes by reviewing work plans and progress reports, approving the work plan for the following year, and making adaptive management decisions as necessary. The PSC will be chaired by the Ministry of Energy and Mines (MEM) and will include representatives from the Ministry of Environment and Natural Resources (MARENA), the Ministry of Health (MINSA), the National Commission for Registration and Control of Toxic Substances (CNRCST), the Ministry of Labor (MITRAB), and UNIDO and other key stakeholders. The GEF OFP will be invited to attend the PSC meetings;

? The **Project Executing Unit (UNIDO PEU, Skills Development and Fair Production Unit (IET/PST/SFP))** is responsible for the overall management of financial and human resources directly related to project implementation in the country. The PEU will be led by the Execution Project Manager (EPM) based in UNIDO HQ (Vienna) and will be accountable to the Implementing Project Manager (IPM) for the achievement of project outputs and outcomes. The PEU will consult both the IPM as the focal point of the GEF Implementing Agency and the Project Steering Committee (PSC) on all matters related to the project. In carrying out its functions, the PEU will act as the secretariat of the PSC. A Project Management Unit (PMU, UNIDO Field Office Managua) will be in charge of the day-to-day management of the project

and will be established by the Project Executing Unit within the UNIDO field office in Nicaragua. It will be composed of at least one National Project Coordinator, and one administrative assistant. Other technical project staff may be housed in the PMU office but will not contribute to PMU activities. The PMU will provide regular updates to the IPM through the submission of quarterly progress reports. The IPM will share updates with PSC members and other stakeholders, including the planetGOLD program.

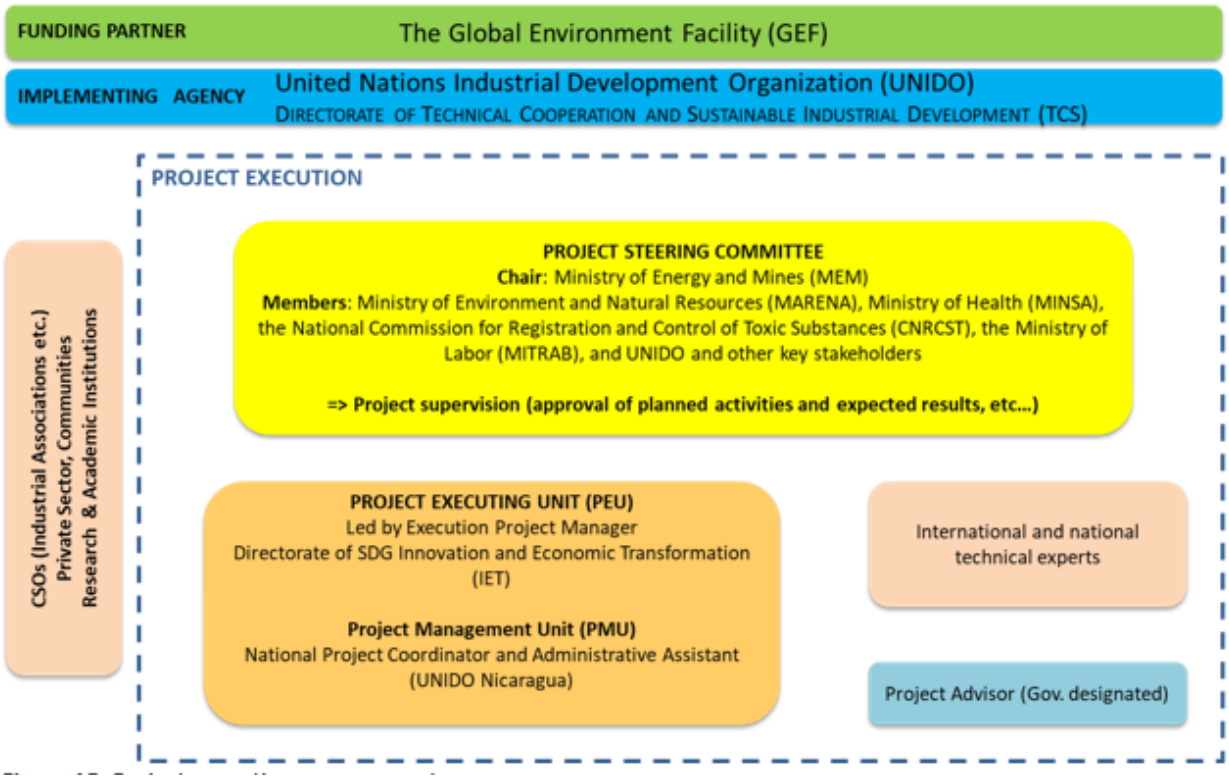

Figure 15: Project execution arrangements

453. Any project modifications will follow the GEF Council document GEF Project Cycles and Programmatic Approaches.

454. The project will be executed by the designated EPM of the United Nations Industrial Development Organization (UNIDO) in accordance with the GEF Project and Program Cycle Policy.

455. The Project Executing Unit led by the EPM will be responsible for the day-to-day management of the activities. All procurements by the Project Executing Unit must be done in consultation with the Ministry of Energy and Mines. All procurements actions by the Project Executing Unit will have to adhere to the provisions of the UNIDO Procurement and Financial Rules and should be based on the annual work plans.

456. According to an agreement signed between Government of Nicaragua and UNIDO in 1993, UNIDO is exempt from all direct taxes, including customs duties and import prohibitions and restrictions with respect to items imported by UNIDO for its official use.

457. Under the project, the Government of Nicaragua will facilitate the exemption of all taxes including import taxes and customs clearance and custom duties for goods and services to be procured under the project.

458. Due to the characteristics and complexity of the activities to be carried out under this project, it is important that the PEU has experience in supporting artisanal and small-scale gold mining, as well as extensive capacity and experience in engaging with the public sector, mining cooperatives, the private sector and other stakeholders for the proper development of working synergies.

459. The Ministry of Energy and Mines will coordinate government efforts related to the project. Within the Ministry, the Director General of Mines will be the governmental focal point.

460. Other stakeholders and representatives of artisanal gold mining projects in the region, in particular planetGOLD's parallel projects, will be involved throughout the life of the project to advise on specific activities, as well as to discuss their experiences and share their lessons learned on formalization, entrepreneurship, access to finance, mining cooperatives and associations, as well as responsible supply chains.

461. The PSC will meet at least once a year. If COVID-19 restrictions remain in place, these meetings will be held virtually. Other monitoring mechanisms are presented in section 9 on "Monitoring and Evaluation".

Programme level interaction

462. The project is based on lessons learned from the first phase planetGOLD (GEF GOLD programme GEF ID 6902). During the preparatory phase, lessons learned from ongoing projects in Latin America in Ecuador (ID 9203) and Peru (ID 9710), as well as from the preparatory phase of the project in Bolivia (ID 10602) informed the design of this project. This was complemented by similar lessons from ongoing projects implemented by UNIDO in Burkina Faso (ID9718), and jointly with UNEP in Mongolia and the Philippines (ID 9695).

463. Coordination with the planetGOLD program and country projects will be carried out mainly through component 4, through forums, meetings, webinars and regular convenings. Close collaboration will be sought particularly with the planetGOLD Honduras project to promote strategies at the regional level.

464. Participation of project representatives in the annual program meetings (APMs) and every two years in the planetGOLD Global Forum will be paid for with project resources. Information on the progress of the project will be reported to the program on a quarterly basis.

465. Both the NPC and the UNIDO IPM will participate in regular program calls to share progress.

Coordination with GEF initiatives

466. The project will coordinate with existing GEF initiatives in the country and in the region to explore synergies, share resources and join activities where possible. During the inception phase, the project will liaise with existing GEF projects in the region to share information and establish partnerships.

Minamata Initial Assessment and National Action Plan on the ASGM Sector in Nicaragua (GEF ID 10148)

467. Since 2021, MARENA together with UNIDO have been developing (i) a revision of the legal framework that is expected to lead to the strengthening of legislation and capacities to comply with Minamata Convention obligations, and (ii) a national mercury emissions and releases inventory in Nicaragua based on UNEP Tier 2 methodology. This inventory includes some information on the ASGM sector. This information is being complemented by a more comprehensive baseline estimate being carried out under the National Action Plan on ASGM which is an obligation under Article 7 of the Minamata Convention for Parties that determine that the sector is more than insignificant in their territory. In addition to MARENA, the Nicaraguan MIA and NAP project is being co-implemented by MEM, MINSA and, for the MIA only, CNRCST. The information gathered so far on ASGM has been essential for the design of this project which is expected to support the implementation of the NAP Nicaragua once it is finalized in 2022 and submitted to the Minamata Secretariat.

Transforming Food Systems and Reducing Deforestation in the Protected Areas and Biological Corridors landscapes from the Southern Caribbean Coast and San Juan River autonomous region (GEF ID 10599)

468. This Full-Sized Project (FSP) to be implemented by FAO in coordination with the Ministry of Environment and Natural Resources (MARENA) is set to start its implementation in 2022. While this intervention is focusing in a different area of the country that is not targeted by GOLD+ Nicaragua, important synergies and lessons learned can be generated as the project aims at (i) developing integrated landscape management systems and (ii) promoting sustainable food production practices and responsible value chains, and (iii) promoting sustainable land management and restoring natural habitats.

Coordination with other initiatives

469. In addition, the project will be implemented in close coordination with ongoing initiatives at national and international level that have been mentioned in section 2.7 and those identified through the co-financing letters.

470. Collaboration with these projects started in the preparatory phase and will continue as a key modality for implementation, ensuring that duplication is avoided, synergies are sought, resources are pooled where relevant, and best practices and lessons learned are regularly consulted.

471. The Stakeholder Engagement Plan will be a useful tool to ensure coordination with other relevant initiatives that have been supporting ASGM in Nicaragua.

Legal Clause

472. The present project is governed by the provisions of the Basic Cooperation Agreement between the Republic of Nicaragua and UNIDO, signed and in force on November 11, 1993.

Transfer of assets

473. Ownership of all or part of the equipment/assets acquired under the project may be transferred to national counterparts and/or project beneficiaries during project implementation, as deemed appropriate by the government counterpart, in consultation with the UNIDO Implementing Project Manager.

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

474. The Republic of Nicaragua became a signatory to the Minamata Convention on Mercury on October 10, 2013. The National Assembly of the Republic of Nicaragua by Decree No. 7549 of September 4, 2014, approved the Minamata Convention on Mercury and its Annexes A, B, C, C, D and E. It ratified the Convention on October 29, 2014, thus approving the legal effects inside and outside the country.

475. The country is currently in the preparation of the Minamata Initial Assessment (MIA) and National Action Plan (NAP) to reduce and, where possible, eliminate the use of mercury in artisanal and small-scale gold mining (ASGM), which will include inventory of mercury emissions and releases plus a roadmap to reduce mercury use in the sector, including possible sources of funding for implementation.

476. In addition, the project is in line with the ??National Plan to Fight Poverty and for Human Development 2022-2026??[1] as it recognizes the mining sector as one of the most dynamic and progressive in the past decade. The Plan will aim at promoting the expansion of the productive capacity with an emphasis on environmental sustainability and the safety of artisanal miners through the sustainable development of small-scale and artisanal mining.

477. Therefore, this project is in line with the country's objectives to map and prevent environmental, safety and health problems related to low-capacity technologies with the use of mercury in the ASGM sector, which will contribute to the ongoing quest to invest in technological solutions and capacities to meet national priorities including the obligations of the Minamata Convention on Mercury.

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[1] Government of Reconciliation and National Unity (2021). National Plan for the Fight against Poverty and for Human Development (2022-2026). Available here.

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

478. The objective of communication and knowledge management is to increase awareness and knowledge to deepen mercury use reduction and improve the understanding of the public sector, the private sector, mining communities and the general public about the ASGM sector.

479. The project will capture, store and distribute knowledge products, experiences and lessons learned to all stakeholders nationally and internationally to positively contribute to a responsible ASGM sector. These products will be disseminated, at a minimum, through the planetGOLD website, which will remain the hub of knowledge gathered by the program.

480. Effective communication will be important throughout the life cycle of the project as it seeks to bring together a wide range of stakeholders and audiences around support for artisanal and small-scale miners.

Knowledge management beyond Nicaragua

481. The project communication officer in Nicaragua will be responsible for providing updates, presenting country specific results, developing communication materials and news related to project activities related to innovations in formalization, such as jurisdictional/landscape approaches to formalization, market access and technology transfer. Lessons learned and documentation of country efforts, and other ASGM-related topics to consider include biodiversity, land use planning, occupational health and safety, mercury-free gold production, and due diligence in gold supply chains.

482. Knowledge products will take a variety of formats. Technical publications will include policy overviews, technical case studies, evaluations, resource toolkits, manuals, guidelines and guidance notes, and datasets. Non-technical knowledge products will include research reports (qualitative and quantitative), strategy papers, and reflection papers: best practices, non-technical case studies, infographics, and perspective papers on ASGM-related topics and issues. These will be shared through the planetGOLD website, and the project will use the program standards and guidelines when developing knowledge products.

483. The country specific page on the planetGOLD website will provide access to best practices, knowledge, insights, lessons learned and success stories that will encourage ASGM stakeholders to engage in networking activities and inform and educate the global development community, the general public and decision makers on key issues, challenges and solutions related to the ASGM sector in Nicaragua.

484. Through the global GOLD+ project, exchanges of knowledge, learning and experience will be organized between the different country projects, particularly at the regional level. The project will participate in planetGOLD events such as Global Forums, Annual Program Meetings (APMs) and other relevant events organized at the program level.

485. The executing unit and the implementing project manager will maintain regular and consistent communication to obtain updated information and share results from other project components to ensure effective implementation of activities.

486. The project will contribute to the quarterly and annual global program report, which will include narrative and quantitative reports on the achievement of project and planetGOLD program level indicators.

Knowledge management in Nicaragua

487. The project will build on the communication strategy developed at the program level, ensuring consistency of messages and brand alignment. However, the strategy will be adapted to the Nicaraguan context by selecting specific audience groups, objectives, key messages and calls to action and key channels.

488. The joint and participatory development of the strategy will be based on mapping, documenting, systematizing and disseminating information, knowledge, experiences and lessons learned related to ASGM in Nicaragua.

489. The communication strategy will identify the most appropriate means to engage key stakeholders (e.g. government institutions, gold mining delegations and cooperatives, individual miners, vocational training centers, universities and technical schools, gold buying entities, the financial and banking sector, and related NGOs and development organizations) based on the local context, cultural differences, and messages that may already be used by parallel artisanal gold mining programs in the country and region.

490. The outreach communication strategies developed will ensure that other key local stakeholders, such as cooperative members and workers, township mayors, local authorities, women's and youth associations, and indigenous peoples, have access to project information.

491. Key messages tailored to each target group, delivered through designated communication channels and tools, will help change perceptions, shift unproductive sentiments of ASGM over time and empower stakeholders involved in the formalization process.

492. In this regard, the project will make use of official media (radio, bulletins, magazines, and television), specialized audiovisual media used by financial institutions or social media, as appropriate. As mentioned above, knowledge will also be accessible through a dedicated project website under the global planetGOLD website, with searchable content, and program/project social media pages (i.e., Facebook page). Radio programs, community forums and other communication channels will be explored as means to reach out to mining organizations throughout the territory.

493. The project will participate in and organize outreach activities, including working groups, technical committees, industry events, training courses, workshops, seminars and other awareness raising activities, while collaborations and partnerships will be explored.

494. Three groups are planned to carry out specific outreach activities: (i) ASGM production, which refers to the productive, organizational and formalization processes of mining cooperatives, mining collectives and individual miners, which can be internalized and used by other productive actors; ii) Jurisdiction, which refers to the knowledge generated within the framework of the jurisdictional approach pilot and which will involve the various actors at the local level (local authorities and productive actors present in the territory, including mining cooperatives, collectives and individual miners); and iii) Government, which refers to public institutions at the national and local levels. Due to their specific attributions and functions in relation to management, policy formulation and control, specific actions should be designed to improve formalization and mercury reduction.

495. Positive impacts and results achieved under ongoing initiatives and NAP results on ASGM will be highlighted and these lessons will be integrated into the GOLD+ Nicaragua Project.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

Monitoring

496. Ongoing monitoring of project activities, outputs and outcomes is necessary to track progress and achievement of objectives, as well as overall project performance. It will also contribute to the early detection of potential problems and the development of corrective measures. Monitoring will improve the performance of project activities and facilitate adaptation to changes that may occur in the project environment.

497. Monitoring activities are developed in line with the GEF monitoring policy and UNIDO's monitoring and reporting policy. The day-to-day monitoring of the project is the responsibility of the PEU.

498. The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored by the Project Management Unit annually, and will be reported in the GEF Project Implementation Report every year, and will be evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. Project risks, as outlined in the risk register, will be monitored quarterly.

499. In order to contribute to the monitoring and evaluation of the planetGOLD program as a whole, the project will provide regular reports to the global project on key indicators, activities and areas of progress. In addition, the project will also actively participate in various program-wide internal coordination events to enhance ongoing communication and knowledge sharing among the planetGOLD projects.

500. The project will submit data once a year to the global project on:

? Program level indicators: i) Amount of mercury reduced/avoided; ii) Amount of finance mobilized (disaggregated by gender); iii) Amount of responsible gold sold to formal markets; and iv) Number of beneficiaries assisted in formalization by the project (disaggregated by gender);

? Additional overall environmental co-benefits for which the project has set targets; and,

? Key achievements on specific project outcomes and activities, using the template provided by the overall project, including information on efforts to ensure that all planetGOLD beneficiary mining entities conform to the planetGOLD Criteria for Environmentally and Socially Responsible Operations.

501. The project will also provide quarterly narrative reports to the global project on key activities and areas of progress towards achievement of program and project specific indicators, using a template provided by the global project.

502. The PEU will prepare an annual progress report as part of the reporting to the GEF (Project Implementation Report - PIR). The annual progress report will include: (i) a narrative report on the progress of activities and outputs against objectives and desired outcomes, using the means of verification and impact indicators; and (ii) a financial report in accordance with UNIDO's accounting procedures, in order to ensure adequate monitoring by the IPM. The narrative reports will be shared with the GEF OFP, government entities, the global planetGOLD project and other relevant stakeholders. The latter will organize a quarterly meeting between UNIDO and the PEU via teleconference to discuss the status of progress, challenges faced and mitigation measures, as well as planned next steps.

503. The UNIDO field office in Managua will attend and participate in relevant monitoring and evaluation activities and visits.

504. During the inception phase, the PEU, in consultation with other project stakeholders, will develop a monitoring plan to be approved by the IPM and subsequently updated annually. The monitoring plan will include tracking progress, performance and achievements related to, inter alia:

? Implementation of project activities;

? Initiatives by project partners to eliminate the use of mercury in ASGM;

? Impact of the implementation of the regulatory framework;

? Stakeholder engagement;

? Environmental and social management plan (ESMP); and,

? Gender action plan.

505. The national project steering committee (PSC), composed of key project stakeholders (see Section 6, Institutional Arrangements and Coordination), will meet at least twice a year to (a) review progress against the monitoring and evaluation indicators as set out in the project results framework, (b) review intermediate and final outputs, (c) approve the annual work plan for the following year, and (d) assess any gaps or challenges and make appropriate adaptive management decisions.

506. In addition, the project will participate annually in the annual program global meetings (APMs) (5 meetings).

Evaluation

507. In accordance with UNIDO's evaluation policy and the GEF evaluation policy, the project will undergo a final independent evaluation. UNIDO's Independent Evaluation Office will be responsible for the Terminal Evaluation (TE).

508. In addition, an independent evaluator, under the responsibility of the Independent Evaluation Office, will conduct a mid-term review (MTR) at the mid-term of the project. The objectives of the MTR are to review the progress of activities, outputs and outcomes and to assess the effectiveness of implementation against the indicators presented in the project's results framework. The findings and recommendations will be incorporated into the implementation strategy for the remainder of the project duration.

509. The independent terminal evaluation (TE) will focus on project results in terms of achievement of objectives based on different criteria such as design, relevance, effectiveness, efficiency, sustainability and impact, partner performance, and gender mainstreaming. The TE will (i) ensure accountability of the project and (ii) develop recommendations for UNIDO staff, partners and other relevant stakeholders.

510. The TE will generally be initiated after the operational completion of the project or during the last six months of operation. The draft TE report will be sent to project stakeholders for comments. Formal comments on the report will be shared openly and transparently, and the final evaluation report will be publicly disclosed.

511. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Under the TE, all project partners and contractors are required to (a) make available studies, reports and other documentation related to the project and (b) facilitate interviews with staff involved in project activities.

512. More detailed information on monitoring and evaluation activities, the corresponding budget and schedule is summarized in Table 12.

Table 12: M&E Activities

M&E Activity	Purpose	Responsible	Budget M&E	Timeline

Workshop and initial report	Adaptation of project activities, outputs and outcomes and proposed indicators and work plan	PEU	0	Within three (3) months after the start of the project
Project Steering Committee (PSC) meetings	Review progress against work plan and budget Overseeing that the project achieves the desired outputs and outcomes Provide guidance on proposed changes or revisions to the project	PEU	0	Bi-Annually (10 meetings)
Quarterly Reports	Evaluate narrative and financial progress made and ensure that resources are properly utilized	PEU	0	End of March, June, October and December
Annual Progress Reports (APRs) / Project Implementation Reports (PIRs)	Review of progress and effectiveness for the GEF Documentation of lessons learned	PEU / IPM	0	June 30; December 31
Continuous monitoring of project execution and tracking GEF core indicators	Continuously monitor project execution and collect data against indicators (GEBs, PlanetGOLD indicators)	PEU	99,048	Ongoing (5 years)
Independent Mid-Term Review (MTR)	Evaluate the progress of the project and recommend corrective actions.	IPM	30,000	Midway through project implementation

Final Report	Measure progress against the baseline. Highlight technical results Identify lessons learned and likely design approaches for future projects, assess the likelihood of achieving the design outcomes	PEU	0	At the end of project execution
Independent Terminal Evaluation	Review project results and coordination mechanisms. Identify lessons learned and actions for future projects Highlight technical achievements	IPM	40,000	No later than three (3) months after completion of project activities.
Total M&E			**169,048**	

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

513. Mercury reduction is the main objective of the project and the key benefit for both the environment and human health. As described previously, the practices used by mining operations in Nicaragua contribute to mercury emissions and releases, so the project's contribution in environmental terms will be significant, as well as contributing to the country's obligations under the Minamata Convention on mercury.

514. In addition, the project will contribute to economic, social and environmental benefits that support the sustainable development of the country.

515. In recent years, ASGM has become an essential source of economic income and employment opportunities, especially considering the concentration of this activity mainly in rural areas.

516. Due to the absence of an adequate regulatory framework and poor formalization of activities in ASGM, and lack of efficient technologies for gold recovery, the potential socio-economic benefits of this activity are diminished. By strengthening (i) the technical and institutional capacities of national and local authorities, (ii) mechanisms, regulations and measures for control and supervision of gold production and trade activities, revenues at central, regional and municipal levels are expected to increase.

517. The project will promote a scenario in which the ASGM sector can increase its economic benefit and have positive impact at the local and national level for the thousands of families that depend primarily, secondarily or temporarily on this activity. Additional economic gains will be achieved through more efficient technologies and subsequent increased gold recovery and responsible supply chains that ensure access to formal markets and better prices. Economic benefits can be translated into social welfare and livelihood security.

518. In the specific case of women miners, the project will improve their access to finance, savings and entrepreneurship, leading to economic empowerment that will contribute to their well-being and that of their families by indirectly impacting issues such as food security. Gender mainstreaming activities will reduce gender inequalities among project beneficiaries.

519. The transition to efficient and/or clean recovery technologies and the introduction of better practices will improve the working and living conditions of miners, including women and vulnerable populations, resulting in better health for miners. Improved mining practices will improve environmental quality and therefore local communities will have, among other environmental benefits, access to cleaner water.

520. Miners and communities will increase their skills and knowledge, leading to improved education in mining areas. In addition, the promotion of formalization processes will also enable miners to access social and financial services. Proper development of the ASGM sector can reduce conflicts over land use or related to environmental pollution.

521. Finally, and in line with the innovative approach followed by the GOLD+ program, in addition to mercury reduction, the project will enable better land management and proper management and disposal of mining waste, which will benefit biodiversity and make communities more resilient to climate change.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	Medium/Moderate		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Medium/Moderate

522. As per UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP), the Environmental and Social screening template has been completed and this project has been categorized as *??Category B??*. Category B projects are likely to have less adverse impacts on human populations or environmentally important areas than those of Category A. As a result, an Environmental and Social Management Plan (ESMP) has been developed which revealed that environmental and social impacts may occur during project implementation. These risks may arise during ore mining and processing. In cases where project beneficiaries continue to use mercury, occupational health and safety (OHS) standards should be applied and proper management of mercury waste should be ensured.

Environmental impacts

523. There are two groups that may be affected as a result of the mining and processing and use or handling of mercury and mercury compounds and wastes: the workers involved and the surrounding communities where ASGM is practiced.

524. In the case of substitution of amalgamation for cyanidation, processes should adhere to the "Best Management Practices for Cyanide Use in the Small Gold Mining Sector"***[1]*** developed by the planetGOLD program.

525. Beyond the above impacts, the project is expected to have long-term positive improvements on the environment. Soil, water and air pollution that may result from poor management and improper disposal of mercury and mercury compounds could be eliminated once the project is implemented.

Social and economic impacts

526. Negative social impacts are expected to be minimal and limited. Resettlement is not expected to occur. Direct effects on ecosystems, sites with archaeological, historical or cultural value are also not foreseen. Although not planned, the impact of the project on the socioeconomic activities of Indigenous Population would be carefully assessed.

Mitigation measures

527. Appropriate mitigation measures will be developed to address identified impacts with the objective of reducing and/or minimizing them.

528. The environmental and social risks identified in the preparatory phase of the project "GOLD+ Nicaragua: Improvement of formalization and reduction of mercury in artisanal and small-scale gold mining in Nicaragua" (taking into account location, regulatory framework and operational safeguards triggered) can be summarized in the Table 13.

Table 13: Summary of environmental and social risks

Type of risk	Risk	Operational Safeguard	Mitigation measure	Responsibility
Environmental risks	Improper handling of mining tailings and waste	OS 9: Efficiency and Pollution Prevention	Implement solid waste management plan including tailings management Manage waste generated with mercury during the transition - maintain proper storage and recommend processing by authorized persons	PEU
	Deforestation and land degradation	OS 9: Efficiency and Pollution Prevention	Develop and integrate environmental protection and restoration plans Awareness raising campaigns and trainings to encourage environmental protection and reforestation	PEU

	Biodiversity loss	OS 10: Health, Safety and Community Protection	Restore disturbed and surrounding sites to improve the functionality of the ecosystems present Evaluate and report on the presence of endangered or endemic species of flora and fauna in mining operations areas	PEU
	Irrational use of water as a resource (surface and groundwater) in process benefits	OS 9: Efficiency and Pollution Prevention	Ensure water use and management complies with the authorizations by the relevant authority Promote resource efficient practices and recycling of water	PEU
	Mercury/cyanide generation in ore processing (prior to project transition to mercury-free technologies)	OS 9: Efficiency and Pollution Prevention	Evaluate the current technologies of the selected organizations and define a continuous and progressive improvement plan for mercury management and reduction. Eliminate the whole ore amalgamation method, promote the gravimetric-preliminary concentration method and only amalgamate the ore concentrate	PEU
	Emission of atmospheric pollutants	OS 9: Efficiency and Pollution Prevention	Evaluate emission sources and design an improvement plan to comply with permissible air pollution limits Consider technological changes and equipment that reduce CO2 emissions	PEU

Social risks	Child labour in ASGM	OS 8: Labour and Working Conditions	Monitor and ensure child and teenagers are not engaged in mining operations	PEU
	Occupational health and worker safety issues (extraction and processing)	OS 8: Labour and Working Conditions	Support the design of occupational health and safety plans Provide workers with personal protective equipment (PPE) and ensure proper use Increase ASM awareness of the health risks of mercury	PEU
	Displacement of women and vulnerable groups due to technological changes	OS 10: Health, Safety and Community Protection	Conduct an assessment on potential impact of technologies Raise awareness on Accountability Grievance Mechanism	PEU
	Infection associated with COVID-19	OS 10: Health, Safety and Community Protection	Implement health protocols and awareness raising trainings Use of masks and sanitizer	PEU

[1] PlanetGOLD (2021). Best management practices for cyanide use in the small-scale gold mining sector. Available here.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted

Title	Module	Submitted
Annex J - GOLD+ Nicaragua ESMP	**CEO Endorsement ESS**	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Annex B: Addressed comments from GEF Council, Minatama Secretariat and STAP		
Comments from the GEF Council		
Comments	**Response from GOLD+ Nicaragua**	**Refe**
Germany Comment • Synergies with other institutions could be enhanced, e.g. with the International Sustainable Chemistry Collaborative Centre (ISC3) in Bonn, as well as with German educational institutions like Beuth University of Applied Sciences, Berlin. The latter offers online education/capacity building (in English and Spanish language) in the field of the Minamata Convention including ASGM, which is crisis resilient even in times of corona virus lock-downs and travel restrictions.	The recommendation has been included under the work to be done under capacity building and knowledge.	Outp
Germany Comment • To include the international multi-stakeholder working group on Women and Mining (www.womenandmining.org) as a global knowledge-sharing partner on gender aspects of the proposal.	The working group will be considered for all gender-related activities to be conducted under the project.	Gend Endo
Germany Comment • The evaluation of the GEF GOLD program has noted that other issues (apart from mercury pollution) caused by ASGM (e.g. deforestation, harmful replacement technologies, child labour, indigenous peoples rights) could have been better addressed. While it is clear that they can not be accurately assessed before sites have been selected, Germany asks the project to fully consider these risks and to ensure co-benefits once possible.	All other issues mentioned have been analyzed during the project preparatory phase and will be address during the implementation.	CEO relat
Comments from the STAP		
STAP Comment • This project will involve the convening multi-stakeholders with the associated challenges (see World Bank, 2014, page 5-7 for examples of these challenges – https://www.wiltonpark.org.uk/wp-content/uploads/WP1314-Report1.pdf). For example, the proposed landscape/jurisdiction approach will involve engaging different actors, such as governments, communities, the private sector, and civil societies. STAP wishes to refer the project proponent to its latest publication on "multi-stakeholder dialogue for transformational change" (https://stapgef.org/publications), which presents principles of multi-stakeholder dialogue (MSD), analyses the context of MSD, and highlights the process of designing an effective MSD.	The multistakeholder dialogue for transformational change document has been consulted to prepare the project stakeholder engagement strategy of the project.	Stake Plan

STAP Comment • The project will adopt the jurisdictional approach (JA) as a framework for structuring interventions. The second paragraph on page 28, however, highlights some of the challenges associated with the JA, including unrealistic expectations, political turnover, limited public sector capacity, and lack of broader support and incentives. Yet, the PIF is silent on how the project will overcome these challenges to ensure success. STAP recommends that this should be done.	The challenges for successful pilots of JA have been considered. The project will build in previous efforts that are already existing in the country (CMMA).	Refer comp
STAP Comment • Component 4 will support capacity building, knowledge sharing, and communication, including "using online education and digital marketing tools to support the traditional participatory workshop and training model to help institutionalize sustainable mining methods at the community level." It is, however, unclear how online education and digital marketing tools will be used given the remoteness of ASGM operations (as noted in the last paragraph of page 19). Does this project intend to provide digital access to ASGM miners? The details of how this component will be achieved need to be elaborated.	The project will not directly provide digital access to miners, but it will aim at increasing the awareness and literacy skills among the beneficiaries. The tools and methodologies will also be adapted to the local context and penetration rates in each case.	Refer
STAP Comment • As rightly noted in the risk section of the PIF, the introduction of new technologies or ensuring mercury-free gold mining may inadvertently result in loss of livelihood. In such cases, alternative livelihood strategies may be required to achieve the project objectives. This is particularly important because mercury-based ASGM may be more profitable than other alternative sources of livelihoods in the targeted communities. Hence, a well-considered strategy may be needed to wean miners from their current practices. The proposal, however, seems not to put enough emphasis on interventions for addressing this issue.	The project will undertake an impact assessment of the technologies to be introduced to avoid negative impacts in specific groups (for example women involved in processing).	Refer comp
STAP Comment • It is good that the PIF acknowledged that the project would contribute to other GEF core indicators, including the area of land restored, area of landscapes under improved practices, and greenhouse gas emission reduction. The PIF did not, however, present clearly how the interventions will lead to these benefits. We encourage that the project proponent elaborates further on this and provide a detailed estimation of all expected GEBs at the PPG stage (as promised in the PIF).	The project has estimated co-benefits such as the landscape area under improved management practices. There was no sufficient information to estimate the CO2 emissions to be avoided but this will be analysed and reported at MTR if applicable.	Refer
STAP Comment • For a project that will depend on significant multi-stakeholder engagement for its success, the stakeholder section of the PIF is inadequate. Please provide a detailed analysis of stakeholders expected to be engaged in the project in the participating countries. Please, also highlight how they will be engaged, their expected role in the project, and whether they have been engaged already or if this is ongoing.	The requested inputs have been included in the Stakeholder Engagement Plan through different matrix analysis.	Refer Engag

STAP Comment • It is good that the PIF acknowledges the potential impacts of projected climate change, for example, desertification on achieving project objectives. The effects of climate change may also influence decisions on ASGM sites? We recommend that a detailed analysis of climate risk and management strategy should be presented for the project.	An analysis of climate change impacts has been included as part of the ESMP. The fact that Nicaragua is particularly vulnerable to climate change and its related impacts will require a close monitoring during the implementation.	Refer Socia
Comments from the Minamata Secretariat		
Comment	**Response from GOLD+ Nicaragua**	**Refer**
Minamata Secretariat Comment • While this project clearly advances implementation of the Minamata Convention, the program description provides limited attention to the Convention requirements, and we are concerned that the various governmental and non-governmental partners going forward will therefore not gain sufficient understanding and advancement of their Convention obligations. We would like to ensure that the child projects clearly focus on Article 7 and Annex C requirements and finalization and implementation of NAPs.	The project will build on the progress achieved under the NAP which should be finalized prior to the start of the implementation.	Refer docu
Minamata Secretariat Comment Because improved health awareness and health surveillance can be strong incentives for formalization and technology uptake, and will be ever more important in light of Covid-19, it will be important to include community-based health and social actors in all aspects of the program.	These actors will be considered at both the national and local level.	Refer Engag
Minamata Secretariat Comment • Gender - Is the gender distribution noted here a widely used metric when very specific community-based data is not available? Or is it simply a placeholder? We note that gender impacts will be more thoroughly evaluated in the child projects. It would also be useful to ensure good estimates of populations "directly" involved (working in ASGM) as well as impacted by ASGM.	The project will aim at gathering sex-disaggregated quality data on ASGM as well as more granular information on the activity. It will build on the baseline done under the NAP and try to cover the data information gaps (when possible).	Refer and G
Minamata Secretariat Comment • Component 1: all the participating countries will already be party to the Convention so not clear what the phrase about ratification refers to – we assume implementation of their MC obligations. Regional cooperation was referred to earlier in challenges description and should be a more prominent part of the project, eg, enhancing ECOWAS or UEMOA actions.	Regional cooperation will be explored with the planetGOLD Honduras project.	Refer docu

Minamata Secretariat Comment • Component 2: The activities on collaborating with local financial institutions should also involve linkages with the formalization efforts, such that formalization schemes and financial products are mutually reinforcing.	The comment is well noted, and this will be considered under component 2.	Comp
Minamata Secretariat Comment • Component 3: In section on enhancing uptake of mercury-free technologies, we note that cyanide is appropriately listed as one of the technologies in the chart. However, no mention is made of the Convention's requirement that ASGM National Action Plans elaborate actions to eliminate "cyanide leaching in sediment, ore or tailings to which mercury has been added without first removing the mercury." This requirement should be prominently featured such that any support for cyanide operations focuses on this critical need.	This is a prevalent practice in the country and efforts will be made to eliminate it accordingly.	Refer and c Endo

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

Project Preparation Activities Implemented	*GETF/LDCF/SCCF Amount ($)*		
	Budgeted Amount	*Amount Spent To date*	*Amount Committed*
Inception workshop	5,000	5,000	
Stakeholder engagement activities	20,000	21,000	
Preparation of Stakeholder Engagement Plan	5,000	5,000	
Baseline data collection	40,000	35,000	
ESMP development	5,000	7,500	
Gender Analysis and Action Plan	5,000	7,500	
Follow-up on co-financing letters	5,000	5,000	
PEE assessment	10,000	0	
Validation workshop	5,000	5,000	
TOR for execution preparation	5,000		5,977
Development of project workplan and project document	5,000	5,000	
Finalization of ProDoc	10,000	9,023	10,000
Total	120,000	104,023	15,977

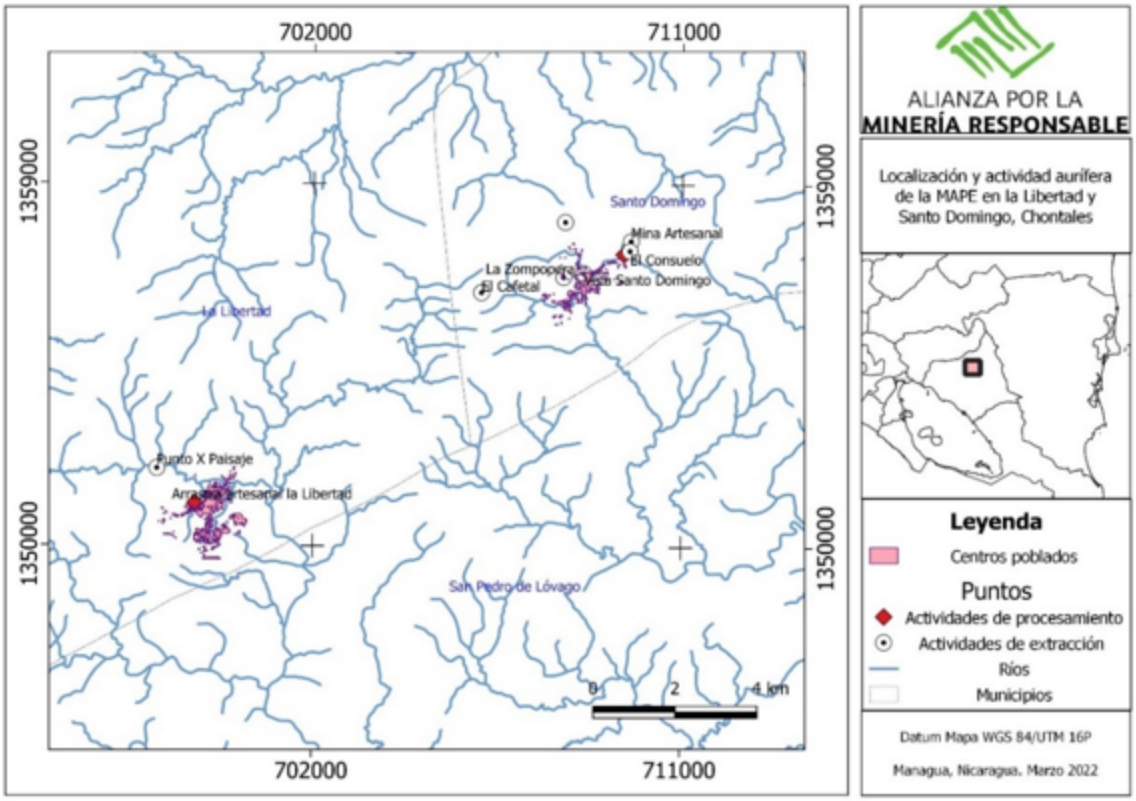
ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

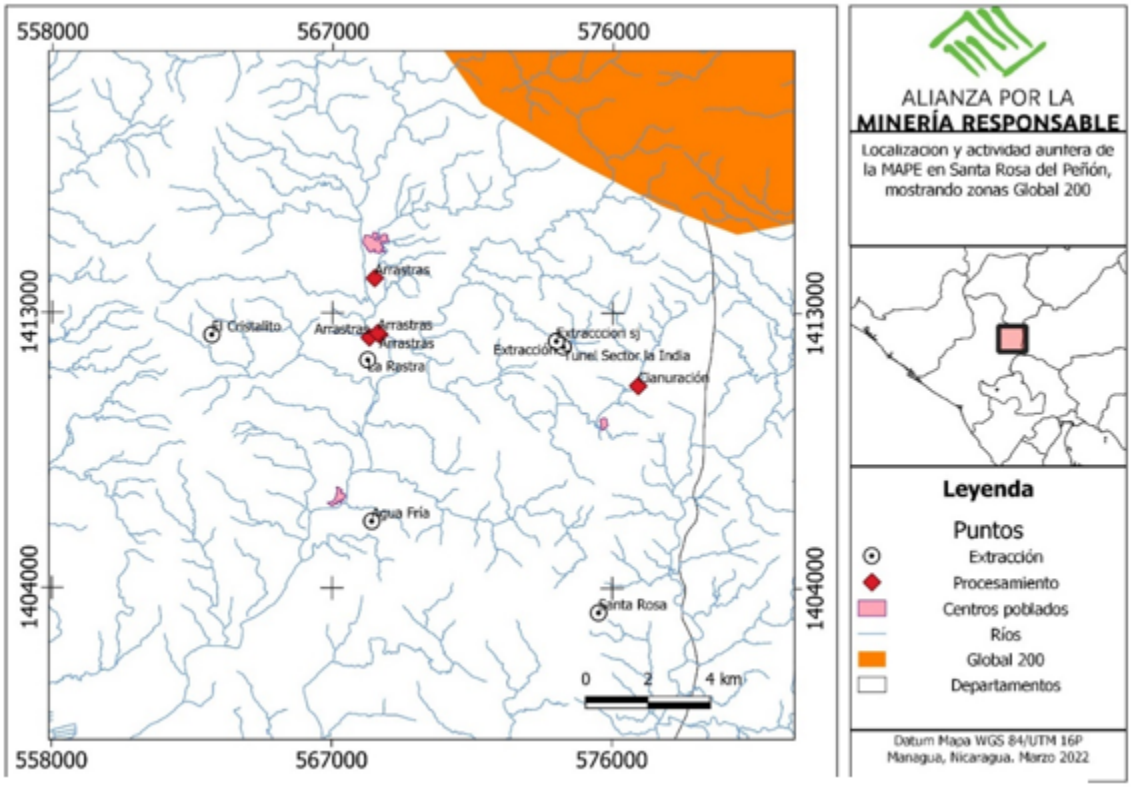
The project recommends piloting the activities in three different areas: (i) La Libertad, (ii) Santo Domingo and (iii) Santa Rosa del Pe??n (note: the jurisdictional approach is recommended to only be piloted in Santo Domingo).

These areas will be confirmed during the inception phase of the project.

The coordinates are: La Libertad (UTM: 16P 699628.155 1351031.187); Santo Domingo (UTM: 16P 657681.211 1272985.049); and Santa Rosa del Pe??n (UTM: 16P 568414.922 1415203.441).



Map of project location(s) in Santo Domingo and La Libertad



Map of project location(s) in Santa Rosa del Pe??n

ANNEX E: Project Budget Table

Please attach a project budget table.

This is a summary of the project budget. A more detailed table per year has been uploaded as a separate annex.

Project Budget Table (indicative)	Summary Budget							
Cost Categories	**Detailed Description**	**Total Component 1**	**Total Component 2**	**Total Component 3**	**Total Component 4**	**M&E**	**Sub-total**	**PI**
Local consultants	Lead Mining / Mineral Processing Expert	0	0	180,000	0	0	180,000	
	National experts	131,000	129,500	0	0	0	260,500	
	Monitoring Specialist	0	0	0	0	99,048	99,048	
	Project Assistant	0	0	0	0	0	0	50,
	Gender Expert	60,000	45,000	15,000	30,000	0	150,000	
	Communications Specialist	29,000	21,750	14,500	80,000	0	145,250	
	Financial Specialist	0	180,000	0	0	0	180,000	
	Sub-total Local Consultants	220,000	376,250	209,500	110,000	99,048	1,014,798	50,
International consultancy / Event Organization	Principal Technical experts	60,500	40,000	40,000	0	0	140,500	
	Senior Technical experts	40,500	60,750	40,500	27,000	0	168,750	
	Technical experts	40,000	40,000	40,000	0	0	120,000	
	Executing Project Manager						0	83,
	Mid-Term Review consultant	0	0	0	0	30,000	30,000	
	Terminal Evaluation consultant	0	0	0	0	40,000	40,000	
	Sub-total International Consultants	141,000	140,750	120,500	27,000	70,000	499,250	83,
Contractual Services – Company	Evaluate ASM policies including recommendations to create a special regulation for the sector (1.1.1)	30,000	0	0	0	0	30,000	
	Promote or strengthen the Municipal Artisanal Mining Commissions (CMMA) (1.1.3)	50,000	0	0	0	0	50,000	
	Elaborate a diagnosis of capacities at regional and local level (1.2.1)	30,000	0	0	0	0	30,000	
	Develop a Capacity Building and Development Programme (CBDP) (1.2.2)	25,000	0	0	0	0	25,000	
	Conduct a tailor-made assessment of the jurisdiction and steps needed to pilot the JA (Level 2) (1.3.2)	30,000	0	0	0	0	30,000	
	Develop JA knowledge products (1.3.3)	45,000	0	0	0	0	45,000	
	Preparing the socio-economic baseline of women miners (1.4.1)	20,000	0	0	0	0	20,000	
	Disseminate baseline results at national/local level (1.4.2)	10,000	0	0	0	0	10,000	
	Develop a situational analysis of mining cooperatives and collectives to identify funding needs (2.1.1)	0	20,000	0	0	0	20,000	
	Develop an analysis of available public and private financing instruments (2.1.2)	0	20,000	0	0	0	20,000	
	Conceptualise appropriate financial mechanism for women and men miners (2.1.5)	0	60,000	0	0	0	60,000	
	Analyse the gold supply chain and prepare recommendations (2.3.1)	0	25,000	0	0	0	25,000	
	Disseminate available tools and systems to ensure traceability of the supply chain (2.3.2)	0	15,000	0	0	0	15,000	
	Promote an inclusive procurement model specifically for women miners (2.3.4)	0	20,000	0	0	0	20,000	
	Promote one (1) responsible and traceable supply chain in the selected municipality (2.3.5)	0	30,000	0	0	0	30,000	
	Develop a gender impact assessment of the introduction of new technologies (3.1.1)	0	0	20,000	0	0	20,000	
	Develop pilot schemes to improve processing technologies (3.1.2)	0	0	25,000	0	0	25,000	
	Install mercury-free technology in the selected municipality (3.1.3)	0	0	153,000	0	0	153,000	
	Provide technical assistance on mercury-free operations (3.1.4)	0	0	25,000	0	0	25,000	
	Systematise and disseminate pilot processes with other mining operations (3.1.7)	0	0	10,000	0	0	10,000	
	Develop responsible ASM curricula adapted to the national context (4.1.1)	0	0	0	20,000	0	20,000	
	Disseminate curricula with training institutes and/or academia (4.1.3)	0	0	0	10,000	0	10,000	
	Develope a communication strategy for the project (4.2.1)	0	0	0	10,000	0	10,000	
	Document and disseminate lessons learned and information produced as a result of the project (4.2.2)	0	0	0	20,000	0	20,000	
	Conduct media and information campaigns on the ASM sector (4.2.4)	0	0	0	25,000	0	25,000	
	Publish at least one original blog article per year (4.2.5)	0	0	0	10,000	0	10,000	
	Sub-total Contractual Services – Company	240,000	190,000	233,000	95,000	0	758,000	
Travel	International travel	20,000	15,000	35,000	20,000	0	90,000	
	Local travel	40,000	30,000	40,000	40,000	0	150,000	
	Sub-total Travel	60,000	45,000	75,000	60,000	0	240,000	
Office supplies	Office equipment and supplies	0	0	0	0	0	0	27,
	Sub-total Office supplies	0	0	0	0	0	0	27,
Training / workshop / meeting	Organise working and consultation sessions in the main mining territories and at national level to build an ASM regulation (1.1.2)	35,000	0	0	0	0	35,000	
	Organise training workshops on formalisation for the public sector (1.2.3)	56,000	0	0	0	0	56,000	
	Organise training workshops on formalisation for the private sector (1.2.4)	14,000	0	0	0	0	14,000	
	Organise training workshops on formalisation for mining actors (1.2.5)	42,000	0	0	0	0	42,000	
	Organise training workshops on products developed under JA (1.3.4)	14,000	0	0	0	0	14,000	
	Organise meetings between government officials and women miners (1.4.3)	56,000	0	0	0	0	56,000	
	Carry out leadership and empowerment training for women (1.4.4)	42,000	0	0	0	0	42,000	
	Organise exchange with funders/buyers (2.1.3)	0	14,000	0	0	0	14,000	
	Conduct training for financial institutions (2.1.4)	0	14,000	0	0	0	14,000	
	Organise trainings for miners and independent collectives (incl. economic empowerment for women) (2.2.1)	0	42,000	0	0	0	42,000	
	Organise training for mining cooperatives (2.2.2)	0	42,000	0	0	0	42,000	
	Organise training workshops on responsible mining and due diligence in supply chains (2.3.3)	0	56,000	0	0	0	56,000	
	Organise trainings on mercury-free technology and occupational health and safety (3.1.5)	0	0	56,000	0	0	56,000	
	Organise training for cyanide leaching operations (3.1.6)	0	0	42,000	0	0	42,000	
	Organise awareness-raising events on mercury-free technologies and impacts of mercury (3.2.1)	0	0	56,000	0	0	56,000	

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).