Environmental and Social Review Summary

PT Weda Bay Nickel – Land Preparation for Construction

This Environmental and Social Review Summary (ESRS) is prepared by MIGA staff and disclosed prior to the date on which MIGA’s Board of Directors considers the proposed issuance of a Contract of Guarantee. Its purpose is to enhance the transparency of MIGA’s activities. This document should not be construed as presuming the outcome of the decision by MIGA’s Board of Directors. Board dates are estimates only.

Any documentation that is attached to this ESRS has been prepared by the project sponsor, and authorization has been given for public release. MIGA has reviewed the attached documentation as provided by the applicant, and considers it of adequate quality to be released to the public, but does not endorse the content.

Country: Indonesia
Sector: Mining & Metallurgy
Project Enterprise: PT Weda Bay Nickel
Environmental Category: A
Date ESRS Disclosed: April 28, 2010
Date ESRS Updated: July 2, 2010 (Exploration & Feasibility)
February 22, 2013 (Land Preparation for Construction)
Status: Due Diligence

NOTICE: This Environmental and Social Review Summary (ESRS) solely reflects a summary of the environmental and social risks and impacts of the additional Land Preparation for Construction (LPC) activities and is not intended, does not include, and should not be construed or interpreted as having any relevance for construction and operations phases of the project. Additionally, the documents disclosed along with this ESRS, including the LPC Environmental, Social and Health Impact Assessment (ESHIA) were prepared solely for the purpose of assessing risks and impacts related to LPC activities and not for construction and operations of the project and should not be interpreted as identifying and evaluating environmental and social risks and impacts of any aspect of the current project or potential future activities beyond the LPC activities identified in the LPC ESHIA and summarized in this ESRS.

LPC activities are not part of construction and operations phases. As stated in the Original ESRS, Weda Bay Nickel are in the process of preparing a complete ESHIA that covers social and environmental impacts related to construction, operation and closure of the project. If Weda Bay Nickel decides to construct and operate the project, and MIGA considers providing a guarantee for this investment, MIGA will disclose and make publicly available an ESRS which summarizes the risks and impacts of construction, operation and closure of the project as provided in such complete ESHIA and publicly disclose the complete ESHIA.

A. Background

PT Weda Bay Nickel (WBN) is proposing to develop a nickel and cobalt mine and a hydrometallurgical processing plant in Central Halmahera and East Halmahera Regencies, North Maluku Province, eastern Indonesia. MIGA provided a guarantee to Strand Minerals (Indonesia)
PT Weda Bay Nickel / Indonesia

Pte. Ltd of Singapore (jointly owned by Eramet of France, Mitsubishi Corporation of Japan and Pacific Metals Co., Ltd.) for the exploration and feasibility phase of the WBN project in August 2010. An Environmental and Social Review Summary (ESRS) was disclosed for the project in April 2010 and later updated in July 2010 reflecting MIGA’s due diligence for the exploration and feasibility phase and included consideration of potential impacts related to construction and operations phases. MIGA has been requested to expand the scope of its guarantee to include Land Preparation for Construction (LPC) activities. Environmental and social risks and impacts related to LPC activities are summarized in this ESRS, which is attached to the previously disclosed ESRS for the exploration and feasibility phase. For environmental and social risks and impacts related to the exploration and feasibility phase, including consideration of construction and operations phases, please see the previously disclosed ESRS.

The purpose of the exploration and feasibility phase is to carry out investigative studies on the potential development of a nickel mine, including construction and operation of a test pit, with the results used to make the final investment decision and to ensure that the correct framework and structure could be put in place to develop a project that is socially and environmentally sustainable, and complies with good international industry practice in its design and operation. In order to ensure that the project is as well prepared as possible for the commencement of the construction phase, WBN notified MIGA of their intent to broaden the scope of its activities during the current period covered under MIGA’s guarantee for the exploration and feasibility phase to include LPC activities.

B. Project Description

WBN started LPC activities in the second half of 2011 with its intention to prepare sites related to the main project infrastructure planned for the construction and operations phases. This activity is expected to result in the generation and recovery of approximately 1.34 million wet tonnes of raw nickel ore located under the design footprints of the proposed infrastructure, which would be sold for export and/or stockpiled for future use during the operations phase. The scope of LPC activities are as follows.

Ore extraction: 1.34 million wet tonnes of raw ore will be extracted from two pits located in two coastal deposits, the 41 Ha. Nuspera deposit and 13.85 Ha. KarKar deposit, which overlay the design footprints of the proposed operations phase ore processing plant and ore stockpiling facility/potential future ore processing plant expansion site, as well as LPC phase Waste Rock Facility (WRF) and overburden, topsoil and timber storage area. Excavation began in January 2012 and is expected to continue until February 2013, when construction of the ore processing plant and port facility is expected to begin.

Ore stockpiling: A 2.5 Ha. Export Temporary Ore (ETO) facility and 12 Ha Export Ore Stockpile (EOS) facility began construction in the second half of 2011 and are currently operating. The ETO facility is used for weighing, crushing, sample collection, and screening ore received from deposits for prior to stockpiling; as well as contractor facilities for administration, vehicle maintenance and refueling and contractor worker locker room and shower, prayer and canteen facilities. The EOS platform is used for ore stockpiling, by grade, prior to export. As of November 2012, approx. 635,000 wet tons of raw ore had been stockpiled.
**Export Jetty:** An Export Jetty began construction in the second half of 2011 and has been completed for the purpose to load barges for trans-shipment of ore to ships docked in the bay. As of July 2012, no export of ore has occurred, however ore export is expected to begin as soon as the permits are granted.

**Roads:** The 1.5 km Link Road involved construction of a new road adjacent to the Trans-Halmahera Highway connecting the deposits with the ETO and EOS facilities (including a crossing over the Wosea river and temporary crossings over Tjetju and Gojemdi streams). The approx. 6 km Outer Ring Road connects the Doro Mesmesan quarry to the Link Road and involved upgrading of an existing logging road. Road construction was completed in late 2011.

**Quarrying:** The 10.5 Ha Doro Mesmesan quarry will source 3 million cubic meters of limestone to be crushed and used for road surfacing. The Kilometer 3 quarry, located along the Trans-Halmahera Highway between the EOS facility and the existing Tanjung Ulie camp, will be used to source 70,000 cubic meters of aggregate base materials for construction and maintenance of roads, and construction of ETO and EOS facilities. Quarrying began in the second half of 2011 and is expected to continue through construction and operations phases.

**Logistics and support:** Includes operation of laboratory and heavy equipment and machinery. Heavy equipment required for LPC activities includes eight excavators, three bulldozers, seven mining haulage trucks, a fuel truck, crusher, and compactor.

**Earthworks and Land leveling:** the principle objective of the LPC is to realize the value of the ore which is located under the proposed footprint of the main project infrastructures. Earthworks and land leveling will be conducted after extraction activities.

**C. Environmental and Social Categorization**

The existing MIGA-guaranteed project is Category A under MIGA’s Policy on Social and Environmental Sustainability. LPC activities include ore extraction and storage, infrastructure construction and maintenance, and quarrying with the intention to sell low grade ore which will not be used in the future operations. Potential environmental risks or impacts which could result from LPC activities include soil erosion and runoff, surface and marine water quality, spills, dust, traffic and waste. These risks and impacts can be largely avoided and mitigated following the standard Mitigation Hierarchy Principle adhered to by WBN through its environmental policy. While the work involved for the LPC activities themselves is on a significantly smaller scale (with, as a result, a significantly lower risk profile) than the main project, the LPC activities are a component of a larger project with prospective risk and impacts that are potentially diverse, irreversible or unprecedented. As such, LPC activities are also Category A.

**C. Applicable Standards**

While all Performance Standards are applicable to this project, based on current information it is expected that the LPC activities will have impacts that must be managed in a manner consistent with the following Performance Standards:

- **PS1:** Social and Environmental Assessment and Management Systems
PS2: Labor and Working Conditions
PS3: Pollution Prevention and Abatement
PS4: Community Health, Safety & Security

LPC activities do not require any additional land acquisition (PS5: Land Acquisition and Involuntary Resettlement) beyond what was already planned and previously disclosed for the exploration and feasibility, construction and operations phases. No direct adverse impacts are expected to terrestrial or marine biodiversity or critical habitats (PS6: Biodiversity Conservation and Sustainable Natural Resource Management), which has been previously disclosed as applicable to the exploration and feasibility, construction and operations phases. LPC activities do not involve interaction with or impacts to indigenous people (PS7: Indigenous Peoples), which has been previously disclosed as applicable to the exploration and feasibility, construction and operations phases. Although no impacts are expected to cultural resources as a result of LPC activities, which has been previously disclosed as applicable to the exploration and feasibility, construction and operations phases, a Chance Finds procedure will be implemented consistent with PS8: Cultural Heritage.

D. Key Documents and Scope of MIGA Review

The following documents were reviewed by MIGA:


An environmental and social monitoring site visit for the exploration and feasibility phase was conducted by MIGA social and environmental specialists in July 2012, where due diligence for the LPC phase was also conducted. The scope of MIGA’s review related to this ESRS is limited to due diligence of the LPC activities.

E. Key Issues and Mitigation

PS1: Social and Environmental Assessment and Management Systems

Social and Environmental Assessment: As explained in the previously disclosed ESRS, WBN prepared an environmental impact assessment (AMDAL) in February 2009 for pre-construction, construction, operations and post-operations phases of the project. A supplemental environmental and social impact assessment (ESIA) was prepared in February 2010 to assess risks and impacts related to the exploration and feasibility phase (Exploration and Development ESIA). WBN also conducted an audit to identify gaps and define additional environmental, social and health impact assessment (ESHIA) studies to be undertaken as part of a Bankable Feasibility Study (BFS) being prepared during the current exploration and feasibility phase to ensure that the construction, operation and closure phases of the project are implemented consistent with the IFC/MIGA Performance Standards, Equator Principles and good international industry practice. The BFS ESHIA includes procedures, plans and measures to manage social and environmental risks and impacts through the mitigation hierarchy related to pre-construction, construction, operations and post-operations phases of the project.
An ESHIA specific to the LPC activities (LPC ESHIA) was prepared in November 2011, reflecting the requirements of the IFC/MIGA Performance Standards and the Equator Principles. The LPC ESHIA is informed by but separate from the BFS ESHIA, with the purpose to identify and assess environmental and social risks and impacts specific to LPC activities against the IFC/MIGA Performance Standards and World Bank Group Environmental Health and Safety (WBG EHS) Guidelines. The LPC ESHIA assessed environmental and social baseline conditions related to LPC activities and assigned significance categories of major, moderate, minor and negligible to environmental and social risks and impacts prior and following mitigation. The LPC ESHIA includes an Environmental and Social Action Plan (ESAP) that details management plans for mitigation strategies that have been put in place prior to undertaking these works.

Management Program: WBN’s Environmental Policy was approved by company management in January 2012 and reflects commitments related to 12 principles and has been translated in Bahasa Indonesia, English and French. The policy is integrated with the Eramet Sustainable Development Policy, IFC/MIGA Performance Standards and good international industry practice. The 12 key principles are summarized as follows:

2. Employees, managers and subcontractors roles and responsibilities
3. Work constructively with stakeholders
4. Comply with all relevant Government of Indonesia (GOI) laws and regulations
5. Consistency with IFC/MIGA Performance Standards
6. Sharing of environmental and scientific knowledge
7. Assess, actively manage and monitor environmental impacts and risks
8. Efficient use of raw materials, energy and water, and minimize waste and harmful emissions
9. Safe and responsible use, recycling and end of life of our products
10. Closure / decommissioning
11. Local communities and indigenous people’s access to ecosystem services
12. Protect and conserve biodiversity

WBN’s ESMS was developed based on IFC/MIGA Performance Standards and follows the ISO 14001 environmental management systems standard to integrate all project phases, with a focus on exploration and feasibility, pre-construction and construction readiness phases. The ESMS includes the following elements: Vision and Mission (policies), Planning (objectives and targets, permitting register, environmental assessment, construction readiness, design optimization), and Operational Management (stakeholder engagement, operational control, monitoring and measurement, biodiversity offset program, management review and reporting, organizational capacity and competency). The ESMS was launched in May 2012, including a gap analysis conducted by an independent consultant and staff induction and training. WBN’s Environment Department has 52 staff (and 20 [part-time/temporary], totaling a 72 strong team) responsible for the implementation of the LPC ESAP, WBN Environment Policy and WBN ESMS.

WBN has engaged a contractor for the construction and operation of LPC activities. WBN’s Environment Department and Engineering Department are responsible for oversight and
management of the contractor to ensure their operations are consistent with the WBN Environment Policy, WBN ESMS and LPC ESAP. WBN’s Environment Department retains responsibility for environmental monitoring and reporting of LPC activities, consistent with the LPC ESAP and WBN’s ESMS.

Organizational Capacity: WBN is strongly committed to operating the project in a social and environmentally sustainable manner and consistent with the IFC/MIGA Performance Standards and good international industry practice, as evidenced through the WBN Environmental Policy. WBN have been operating at the Tanjung Ulie camp since 1997, building its knowledge and capacity over time to manage environmental and social risks. Eramet, which acquired the majority shareholding in PT Weda Bay Nickel in May 2006, is an established mining and metallurgical company, with an extensive, long-term global experience in the mining sector and a significant commitment to sustainability, as evidenced through the group’s Sustainable Development Policy, Health and Safety Charter, Safety Charter and Environmental Charter.

PS2: Labor and Working Conditions

WBN’s contractor for the construction and operation of LPC activities employs approximately 150 workers. WBN has approximately 30 direct hire workers with responsibility for oversight, monitoring and reporting on LPC activities. WBN’s human resources policies and procedures were explained in the previously disclosed ESRS.

WBN maintains a Safety Management System called WedaSafe that proactively identifies and controls risk so as to prevent accidents occurring. Safety is measured and quantified to better direct the safety process and safety performance targets are achieved through proper implementation of an effective health and safety management system.

WedaSafe is designed as a framework that allows WBN to consistently identify and control its safety risks, reduce the possibility of accidents, help achieve compliance with GOI safety legislation, IFC/MIGA Performance Standards and good international industry practice, and continually improve its performance. WedaSafe compliments the implementation of the OHSAS 18001 occupational health and safety management system that incorporates recognized safety management principles. Safety is a core value of WBN and management, all staff and contractors are obligated to operate a safe work place, strive to minimize incidents that place individuals and operation processes at risk and to ensure that safety, health and loss are considered in every aspect of the project.

WBN sets a safety goal of zero injuries. Responsibilities of line supervisors are to provide adequate supervision to ensure risks of all assigned jobs and tasks are assessed, and the jobs and tasks are carried out by competent personnel in a healthy and safe manner. Each employee is individually responsible to create a work environment that eliminates OH&S hazards whenever possible, to as to ensure that all work is conducted in a safe and healthy environment. Every member of the WBN team is required to actively participate and remain committed to the safe operations process so that WBN can meet their goal to minimize the occurrence of injuries and occupational illnesses. Safe operation is a key performance metrics of every WBN project and activity.
PS3: Pollution Prevention and Abatement

Significant adverse risks and impacts related to LPC activities, assessed as “major” in the LPC ESHIA, include soil erosion and runoff, surface and marine water quality. These risks and impacts will be mitigated through the implementation of mitigation measures as presented in the LPC ESAP. Information presented to MIGA and site visit findings indicate that potential adverse pollution impacts related to LPC activities have been appropriately managed, mitigated and monitored consistent with PS3.

Soils: Potential erosion is expected from the WRF (Waste Rock Facility), topsoil storage facility and ore stockpile facility. Erosion control measures will be implemented using proven engineering designs developed through operation of the test pit. The design of retaining walls for WRF are in accordance with proven results developed in the test pit, with suitability of design and landform stability assessed progressively as the WRF develops. Topsoil will be removed immediately, once exposed and land clearing will be minimized.

Surface water: Sediment resulting from runoff related to the excavation pits, the WRF, topsoil storage facility, ETO and EOS facilities, and the export jetty has the potential to impact surface and marine water quality. Appropriate mitigation measures are provided with specific consideration of each particular activity that is being undertaken. All earthworks will require submission of erosion and sediment control plans prior to commencement, which include measures maintaining vegetation cover until clearing is necessary, immediate relocation of topsoil, use of temporary tarpaulin covers for heaps, minimizing exposure time for cleared areas, temporary sediment retention measures (silt fences, sediment dams, temporary barriers and sediment ponds) and rehabilitation. Sediment retention basins have been constructed in riparian zones to collect runoff from excavation activities. The EOS has been designed and constructed to divert runoff into a series of sediment retention ponds prior to entering the sea and all stockpiled ore at the EOS is covered by tarpaulins to protect the material and reduce runoff risk. WBN currently maintains a daily sampling program for a number of streams in the study area and has plans in place to take remedial action if increases in the sediment load in streams are identified.

Marine water: It has been anticipated that the surface runoff from infrastructure and earthworks, as well construction of the Export Jetty (which has the potential to generate sediment plumes) may have certain environmental impacts. The primary form of sediment control during Export Jetty construction was the early installation of the outer armoring walls to contain potential sediment drift during the dumping and push out of the aggregate materials. In addition, all rock fill material was washed prior to deposition. The operation is closely monitored and procedures are in place to halt construction or maintenance activities should sediment plumes persist.

PS4: Community Health, Safety & Security

Adverse risks and impacts to community health and safety related to LPC activities, assessed as “major” in the LPC ESHIA, include spills, dust and traffic. These risks and impacts will be mitigated through implementation of mitigation measures as presented in the LPC ESAP. Information presented to MIGA and site visit findings indicate that potential adverse pollution impacts related to LPC activities have been appropriately managed, mitigated and monitored consistent with PS4.
Spills: The potential for accidental spillages of fuel, lubricants and other vehicle fluids is related to the operation of vehicles and heavy machinery during LPC activities. Possible risks and impacts are related to contamination of soils and surface water. WBN employs a multistage spill mitigation plan to minimize risks, minimize impacts, and report on incidents. Risk minimization includes use of aboveground storage tanks with secondary containment in the contractor area of the EOS facility, limiting vehicle and heavy machinery refueling to designated areas using defined procedures, and regular maintenance of vehicles and heavy machinery. Impact minimization will be conducted through preparation and implementation of a spill response plan, maintaining spill kits at the EOS facility, inspection, remediation and training. Incident reporting will be conducted through establishing a spill reporting procedure that includes compulsory reporting, follow-up and close-out.

Dust: Possible risks and expected impacts are related to limestone hauling from the Doro Mesmesan quarry to the EOS facility via public roads, including the Trans Halmahera Highway. This activity was conducted as an interim measure and included the traversing of the residential areas of the Lelilef villages, with the potential to create dust that would impact on sensitive residential and community receptors. These risks and impacts were mitigated through extending the road watering program to Lelilef village, and providing driver training and imposing a 20 km/h speed limit for limestone haul vehicles within residential areas as part of the WBN traffic management plan. This risk and impact has been avoided with completion of the Outer Ring Road.

Traffic: Possible risks and expected impacts are related to increased frequency of vehicle, truck and heavy machinery traffic passing through the Lelilef Village area on the Trans Halmahera Highway. This risk and impact is expected to be temporary and will be mitigated through implementation of the WBN traffic management plan and institution of signage and signaling at intersections, use of trained spotters to observe traffic conditions and interaction of project vehicles with Trans Halmahera Highway traffic, driver education and induction for all LPC staff, strict enforcement of a 20 km/h speed limit through the village, and curfews and no-go times on haulage activities. This risk and impact has been avoided with completion of the Outer Ring Road.

F. Environmental Permitting Process and Community Engagement

As explained in the previously disclosed ESRS, the AMDAL for this project was approved by the Environmental Protection Agency of North Maluku Province in June 2009 after being disclosed at the provincial level, through public technical committee and evaluation committee meetings at the national level and reviewed by an AMDAL commission consisting of civil society organizations and government representatives. As the LPC activities fall within the scope of the AMDAL approval, no further ESIA related GOI approvals were required. The LPC ESHIA was prepared to satisfy Eramet’s Sustainable Development Policy, WBN’s Environmental Policy, IFC/MIGA Performance Standards and good international industry practice.

Throughout its activities, WBN has been in continuous contact with communities. In addition to community consultation that occurred during the AMDAL approval process, as explained in the previously disclosed ESRS. Since 2008, WBN has been continuously carrying out disclosure and consultation activities with the community. A comprehensive public consultation and disclosure plan has been developed and implemented by WBN for the project, including for the LPC
activities. The community consultation plan includes information concerning stakeholders, their interest groups, key messaging to all groups including vulnerable groups, a clear outline of WBN responsibilities, from senior management down within the organization, timetable activities and response plans. A grievance mechanism is already in place and maintained by the WBN Corporate Social Responsibility team.

Information presented to MIGA and site visit findings, through meetings with local villages and community members, confirm community support for LPC activities.