

## 6. Environmental and Social Action Plan (ESAP)

Task Title/Description	Anticipated Completion Date	Indicator of Completion
ESMS Policy: The overarching Policy statement will be strengthened to: (i) include a documented process for continuous review and revision of policies with senior management participation; (ii) update the policy on community health, safety and security, including a management system procedure to align with the Performance Standards. Once updated, the policy will be communicated to contractors and suppliers.	03/31/2018	ESHS Policy Updated and communicated to all staff and contractors.
ESMS Identification of Risks and Impacts: Vale do Parana will update its risk management process to (a) review its risk assessment whenever there is a change in processes, technology, activities or an expansion; (b) improve identification of risks and impacts of its operations to communities on a periodic basis.	a) 03/31/2018 b) 03/31/2018	a) Risk assessment process reviewed b) Upgraded risk management procedure addressing communities
ESMS Management Programs: Formalize ESMS procedure for a Code of Conduct for the security personnel at the Company facilities, and manage each identified risk in alignment with the Voluntary Principles (VPs) on Security Forces and Human Rights of the United Nations.	03/31/2018	ESMS procedure for Code of Conduct for the security personnel
ESMS Organization Capacity and Competency: Implement an ESMS procedure to measure the effectiveness of the formal training program to develop expertise to manage the ESMS.	03/31/2018	Procedure to measure the effectiveness of the formal training program to develop expertise to manage the ESMS
ESMS Emergency Preparedness and Response: Update its emergency preparedness and response procedures to: a) account for emergency planning to involve communities; b) regular review of the training programs for Emergency Preparedness and Response; c) review its emergency response procedures whenever there is a change in processes, technology, activities or an expansion.	a) 11/30/2017 b) 03/31/2018 c) 11/30/2017	a) Updated Emergency Preparedness and Response procedures for external emergency management b) Procedure for the reviews of training program c) Procedure to update emergency response
ESMS Stakeholder Engagement: a) The Company will enhance environmental and social communication with external stakeholders. b) Vale do Parana will enhance its existing website to keep external parties informed and afford them an instrument to use the external grievance mechanism to express concerns and complaints about Company operations. c) issue annually in the website, a report meeting the Global Reporting Initiative's Guidelines.	a) 04/30/2018 b) 06/30/2018 c) 06/30/2018 and annually	a) Updated communication procedure with external stakeholders b) Website enhanced to provide information to stakeholders c) Initial annual website report meeting Global Reporting Initiative's Guidelines.
ESMS Community Grievance Mechanism: The Company will develop, operationalize, ensure training for all staff, and publicize a Corporate Community Grievance Mechanism (GM) at all locations. The GM shall be designed to receive, accept, analyze and respond to complaints from affected communities, and the general public regarding its operations and transport operations. The implemented mechanism	03/31/2018	Corporate Community Grievance Mechanism, and implemented. Report any GM events in the Annual Report to IIC

shall include public external communication to public for dissemination of the grievance mechanism and how individuals may register grievances publicly or anonymously with the Company, brought to the attention of senior management, and resolved. Any event will be recorded in the Annual Report to IIC		
PS 1 ESMS Compliant: a) The Company is required to demonstrate a PS1 compliant Corporate Environmental and Social Management System (ESMS). To close gaps and demonstrate compliance of the ESMS, The Company will provide to IIC, for review and clearance, its Procedures Manual. b) Compliance with the PS1 ESMS element requirements will be verified by IIC through a site supervision visit.	a) 07/31/2018 b) 08/31/2018	a) Procedures manual for the ESMS b) PS1 ESMS Compliant
Employee Grievance Mechanism: Establish a procedure to ensure all types of worker grievances are captured, recorded, communicated, and monitored, with records maintained on actions taken and feedback provided to employees on each grievance.	a) 10/31/2017 b) 10/31/2017 and Annual Report	a) Procedure to ensure grievances are recorded, communicated, and monitored b) Records of all GM incidents and number of periodic refresher sessions for the GM reported in Annual Report
GHG emissions: Vale do Parana will implement a Management Systems procedure for Emissions Inventory of Greenhouse Gases to be reported annually to IIC.	02/15/2018 and each year in the Annual Report to IIC	Report to IIC GHG footprint annually
Groundwater quality monitoring: Develop a database for the continuous monitoring of groundwater quality	10/31/2017 and each year in the Annual Report to IIC	Database developed
Wastewater treatment: Assess wastewater quality at the point of discharge of the lined ponds for sanitary wastewater and discharge to soil for the industrial effluent, and compare against regulatory standards for Brasil, applicable WBG General EHS guidelines for soil discharge, and report to IIC.	10/31/2017 and each year in the Annual Report to IIC	Initial wastewater quality reports for wastewater quality at the point of discharge of the lined ponds for sanitary wastewater and discharge to soil for the industrial effluent
Pesticide Management: a) In all operations, the Company shall eliminate the use of WHO Class 1a/1b and Class2 chemical formulations. b) The Company will provide adequate PPE based upon MSDS and/or ICSCs for the materials used. Vale do Parana will provide documentary evidence of the training of employees handling pesticides specifically in the use of adequate Personal Protection Equipment (PPE) based upon MSDS and/or ICSCs, and will fully integrate pest management procedures into the ESMS procedures manual. c) Monitor the cholinesterase levels in workers applying pesticides.	a) 10/31/2017 and each year in the Annual Report to IIC b) 12/15/2017 and each year in the Annual Report to IIC c) 09/30/2017 and each year in the Annual Report to IIC	a) WHO Class 1a/1b and Class2 chemical formulations eliminated b) Report on PPE use based on MSDS and/or ICSCs pesticide hazard c) Annual cholinesterase report.
Community engagement: develop: Develop Community Engagement Plan and Company Code of Conduct for community engagement.	01/31/2018	Evidence of implementation of Community Engagement Plan and Company Code of Conduct.
Community Safety: Enhance ESMS procedure to guarantee community safety during transport of Vale de Parana	03/31/2018	ESMS procedure for community safety during transport presented

<p>products. It shall include accident prevention measures, such as appropriate speed limits and safe driving practices.</p>		<p>to IIC and implemented with transport firm</p>
<p>Security Management Plan and Operating Procedures:  Company will manage security forces in accordance with PS4 requirements as described in paragraph 12 – 14, and will provide a means for communities to channel complaints about the Company’s security arrangements or personnel. Develop a Code of Conduct and Security Management System procedures for security personnel, provide human rights training, and prepare a corporate level procedure to address and manage each identified risk in alignment with the Voluntary Principles (VPs) on Security Forces and Human Rights of the United Nations.</p>	<p>03/31/2018</p>	<p>Security Operating procedures in accordance with PS4 requirements, including alignment with the UN Voluntary Principles on Security Forces and Human Rights</p>