



THE PRINCIPLES OF SUSTAINABLE DEVELOPMENT AND THE WHABOUCHI PROJECT

For Nemaska Lithium, the concept of sustainable development must integrate the definition outlined in the report of the Brundtland Commission, i.e. « a development that meets the needs of the present without compromising the ability of future generations to meet their own needs. » Consequently, and in order to put in actions the commitments it took as part of the Environmental Assessment process for the Whabouchi Project, Nemaska Lithium has given itself a tool for integrating sustainable development in its governance and everyday projects.

In the case of the Whabouchi Project, which includes the operation of a spodumene mine and associated concentrator, the Environmental and Social Impact Assessment (ESIA) and the various documents prepared by Nemaska Lithium, all provided to the *ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques* (MDDELCC) and to the Canadian Environmental Assessment Agency (CEAA), outline the various environmental and social issues associated with the project. Under the applicable provincial environmental authorization procedure, a similar analysis will be conducted for the hydrometallurgical plant site planned in Shawinigan.

In the coming months, Nemaska Lithium will determine, in cooperation with its Cree partners (Chinuchi Agreement) and the communities of Chibougamau-Chapais and Shawinigan, a series of objectives and indicators to inform decision-making and/or enhance the various decisions to be taken for the proper development of its projects from a sustainable development perspective.

Such approach stems from the Quebec government adoption in 2006 of the *Sustainable Development Act*. All industrial development projects undertaken in Quebec now have to comply with the principles of sustainable development.

The Act stems from a desire to create an environment conducive to innovation and the renewal of practices within organizations in Quebec society. The principle has certainly been overused over the years, but the Act establishes a legal framework for accountability in sustainable development; it is a way to channel efforts that have been undertaken by various actors - individual, community, political, industrial, etc. - to achieve common goals of environmental, social and economic sustainability..

Nemaska Lithium's Sustainable Development objectives are directly related to those expressed in the provincial Act, namely:

- Maintain environmental integrity to ensure the health and security of human communities and life-sustaining ecosystems;
- Ensure social equity to enable the complete fulfillment of all men and women, development of communities and respect for diversity;
- Aim for economic efficiency to create an innovative and prosperous economy that is ecologically and socially responsible.



At the heart of the concept of sustainable development in Quebec, there are 16 principles to be considered in the context of actions taking place in a project; these are defined by Section 6 of the Act and are as follows:

- Health and quality of life;
- Social equity and solidarity;
- Environmental protection;
- Participation and commitment;
- Economic efficiency;
- Access to knowledge;
- Subsidiarity;
- Inter-governmental partnership and cooperation;
- Prevention;
- Precaution;
- Protection of cultural heritage;
- Biodiversity preservation;
- Respect for ecosystem support capacity;
- Responsible production and consumption;
- Polluter pays;
- Internalization of costs.

In the specific context of mining projects, Sustainable Development as defined by Natural Resources Canada includes the following:

- Finding, extracting, producing, adding value to, using, re-using, recycling and, when necessary, disposing of mineral and metal products in the most efficient, competitive and environmentally responsible manner possible, utilizing best practices;
- Respecting the needs and values of all resource users, and considering those needs and values in government decision-making;
- Maintaining or enhancing the quality of life and the environment for present and future generations;
- Securing the involvement and participation of stakeholders, individuals and communities in decision-making.

In the past, Nemaska Lithium has already committed to deploy all the efforts necessary to ensure that the project meets the basic principles of sustainable development. The following tables depicts items taken from the mine (Nemaska) and hydromet plant (Shawinigan) projects that meet or take into account the principles of the *Sustainable Development Act*.

On the economic side, Nemaska Lithium has published its "Guiding Principles of its Local Procurement and Employment Strategy", which is available on the Web site. Among others, this Strategy includes a commitment to contributing to the economic development of local communities where it conducts its activities by sourcing employees, goods and services from local businesses, addressing the gaps in local capability, and building suppliers' competitiveness in order to meet global standards and qualify for contracts with the operator and other clients. We invite you to consult this document for details of these guiding principles.

Environment, health and safety are already and will remain the foundations of its actions. Nemaska Lithium is committed to protecting the environment and minimizing the impacts of its project. For example, it has already changed its mining project during the environmental assessment to take into account concerns expressed by the Crees of Nemaska and taking a series of formal commitments. These have also been officially registered in the various authorizations issued in the summer of 2015 by the provincial and federal authorities.

Actions from the mine project	Principles of sustainable development (<i>Sustainable Development Act</i>)															
	Health and quality of life	Social equity and solidarity	Environmental protection	Participation and commitment	Economic efficiency	Access to knowledge	Subsidiarity ¹	Inter-governmental partnership and cooperation	Prevention	Precaution	Protection of cultural heritage	Biodiversity preservation	Respect for ecosystem support capacity	Responsible production and consumption	Polluter pays	Internalization of costs ²
Completed and/or ongoing																
Environmental Policy and Environmental and Social Management Plan filed as part of the Environmental and Social Impact Assessment (ESIA) of the mining project	x		x				x		x							
Targeted commitments and mitigation measures for anticipated impacts on the biophysical and human environment	x									x						x
Impacts and Benefits Agreement (IBA) signed in November 2014 with the Cree community of Nemaska, the Cree Nation Government and the Grand Council of the Crees (Chinuchi Agreement)		x		x			x				x					x
Environmental assessment procedures (ESIA) completed and the provincial and federal authorizations obtained in the summer of 2015			x					x	x							
Commitment to make accessible, synthesize and disseminate documentation, via its website, but also via the monitoring committees								x								
Rehabilitation and Mine Closure Plan filed with MERN in spring 2015 for approval in compliance with the Mining Act	x		x									x				x
Establishment of a network of stations to collect information on the environment (air quality, water quality, etc.)								x		x						
Compensation and mitigation of impacts of the mine site on the physical, biological and human environment adopted as part of the ESIA and included in the authorizations issued by the responsible provincial and federal authorities			x									x	x			x
Tailings production and management designed to minimize environmental impacts (ex. filter-pressed tailings, stockpile with no dam, recycling/reuse of water and reagents)			x											x		
Establishment of an Implementation Committee and of an Environment Committee under the Chinuchi Agreement			x	x			x	x								
Commitment to sign a Declaration of partners with the communities of Chibougamau and Chapais		x		x				x								
Local Procurement Policy adopted prior to construction start-up		x														
Commitment to participate in the training of the local Cree workforce and encourage its hiring		x						x								
Commitment to participate in the training of the local Jamesian workforce and encourage its hiring		x						x								
Pre-consultation process with information and exchange sessions focused on citizen participation				x				x								
Meetings and discussions with provincial and federal government authorities at all stages of the project																
Compliance with the legal framework and government policies as well as with regulatory requirements, authorizations and environmental design criteria at all project phases										x						
Continuous improvement of risk management processes and application of the ALARP principle (« as low as reasonably practicable »)										x						
Promotion of best available technology economically achievable (BATEA) for all project phases and activities										x						x
Identification of areas of archaeological potential completed as part of the mine site ESIA (no site of interest identified in the area)											x					
Project design aiming to reduce its impact on activities related to land use (trapping, hunting, fishing, snowmobiling, ATV, etc.)											x					x
Commitment to reduce the impact of the project on landscape											x					
Compensation programs for affected wetlands and fish habitats developed in collaboration with provincial and federal authorities as well as concerned stakeholders												x	x		x	x
Energy supply is mainly from hydroelectric source														x		
Recirculation of 99.2% of the water used for industrial purposes at the mine site to minimize water consumption (mine wastewater utilization rates established according to the method recommended by the MDDELCC in Directive 019)														x		
To be completed																
Environmental Management System implemented before the construction of the mine			x													
Continuous improvement of the Environmental Management System										x						x
Monitoring of the performance of enhancement measures as part of the Environmental and Social Management Plan					x											
Environmental Surveillance and Monitoring Program (air, noise, water, fauna, flora) adopted for all project phases as well as post-closure	x		x							x			x			
Dissemination of results of environmental monitoring to the population, organizations and institutions wishing to use those to build databases								x		x						
Prevention Program, Risk Management Plan (technological, health, safety and environment) and Emergency Response Plan adopted before the construction of the mine	x								x	x						
Waste Management Plan based on the 3RV and specifically developed prior to construction of the mine for each of the project phases														x		
Program to encourage employees to detect and report leaks and malfunctions adopted before the construction of the mine														x		
Responsible Procurement Policy for other hazardous waste adopted prior to the construction of the mine														x		
Creation of some 375 jobs in the construction phase and about 185 jobs in operation at the mine site						x										
Targeted stimulation of the local and regional economy through investments of around \$ 190 million (construction phase)						x										
Recurring stimulation of the local and regional economy through annual investments of around \$ 36 to 52 million (operation phase)						x										
Creation of Economic Benefits Maximization Committees (COMAX)				x	x		x									
Implementation of municipalities-companies discussion tables				x			x									
Payment of individuals income taxes (employees), consumption taxes, taxes on corporate profits, mining taxes paid to the Quebec and Canada governments and mining royalties						x										x
Community and Social Engagement Program						x										

¹ Powers and responsibilities must be delegated to the appropriate level of authority. Decision-making centres should be adequately distributed and as close as possible to the citizens and communities concerned. (*Sustainable Development Act*)

² The value of goods and services must reflect all the costs they generate for society during their whole life cycle, from their design to their final consumption and their disposal. (*Sustainable Development Act*)

Actions from the hydromet plant project	Principles of sustainable development (<i>Sustainable Development Act</i>)															
	Health and quality of life	Social equity and solidarity	Environmental protection	Participation and commitment	Economic efficiency	Access to knowledge	Subsidiarity ¹	Inter-governmental partnership and cooperation	Prevention	Precaution	Protection of cultural heritage	Biodiversity preservation	Respect for ecosystem support capacity	Responsible production and consumption	Polluter pays	Internalization of costs ²
Ongoing																
Commitment to participate in the training of the local workforce and encourage its hiring		x				x										
Local Procurement Policy adopted prior to construction start-up		x														
Environmental authorization process completed in compliance with the Environment Quality Act			x			x		x								
Compensation and mitigation of impacts on the physical, biological and human environment adopted as part of the environmental authorization process and included in the authorizations issued by the responsible provincial authorities			x								x	x				x
Agreement with the City of Shawinigan for the acquisition of the former Laurentide mill and its rehabilitation via the construction and operation of a secondary processing plant of the spodumene concentrate produced at the Whabouchi mine (production of lithium hydroxide)					x											
Tailings production and management designed to minimize environmental impacts (ex. recycling/reuse of water and reagents)			x										x			
Energy supply is mainly from hydroelectric source													x			
Maximized recirculation of the water used for industrial purposes at the plant site to minimize water consumption (mine wastewater utilization rates established according to the method recommended by the MDDELCC)													x			
Commitment to make accessible, synthesize and disseminate documentation, via its website, but also via the monitoring committees						x										
Meetings and discussions with provincial government authorities at all stages of the project							x									
Compliance with the legal framework and government policies as well as with regulatory requirements, authorizations and environmental design criteria at all project phases							x		x							
Promotion of best available technology economically achievable (BATEA) for all project phases and activities									x							x
Identification of buildings listed in the Quebec Register of Cultural Heritage present near the plant site. Collaboration with the City of Shawinigan and the MCC with respect to measures to be taken										x						
Project design aiming to reduce its impact on activities related to land use (fishing, recreational boating, snowmobiling, ATV, etc.)										x						x
Commitment to reduce the impact of the project on landscape										x						
To be completed																
Environmental and Social Management Plan developed before plant construction for each of the project's important environmental and social issues to control the environmental performance of the site	x		x				x		x							
Targeted commitments and mitigation measures for anticipated impacts on the biophysical and human environment	x								x							x
Environmental Surveillance and Monitoring Program (air, noise, water, fauna, flora) adopted for all project phases as well as post-closure	x		x						x			x				
Prevention Program, Risk Management Plan (technological, health, safety and environment) and Emergency Response Plan adopted before the construction of the plant	x							x	x							
Environmental Management System implemented before the construction of the plant			x													
Establishment of a Consultation and Monitoring Committee consisting of community representatives			x	x		x	x									
Pre-consultation process with information and exchange sessions focused on citizen participation				x		x										
Implementation of municipalities-companies discussion tables				x			x									
Creation of Economic Benefits Maximization Committees (COMAX)				x	x		x									
Creation of about 100 jobs in operation at the plant site					x											
Targeted stimulation of the local and regional economy through investments of around \$ 300 million (construction phase)					x											
Recurring stimulation of the local and regional economy through annual investments of around \$ 60 million (operation phase)					x											
Monitoring of the performance of enhancement measures as part of the Environmental and Social Management Plan					x											
Payment of individuals income taxes (employees), consumption taxes, taxes on corporate profits, mining taxes paid to the Quebec and Canada governments and mining royalties					x											x
Community and Social Engagement Program					x											
Establishment of a network of stations to collect information on the environment (air quality, water quality, etc.)						x			x							
Dissemination of results of environmental monitoring to the population, organizations and institutions wishing to use those to build databases						x			x							
Continuous improvement of risk management processes and application of the ALARP principle (« as low as reasonably practicable »)									x							
Continuous improvement of the Environmental Management System									x							x
Waste Management Plan based on the 3RV and specifically developed prior to construction of the plant for each of the project phases													x			
Program to encourage employees to detect and report leaks and malfunctions adopted before the construction of the plant													x			
Responsible Procurement Policy for other hazardous waste adopted prior to the construction of the plant													x			

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