



ᓄᑕᐅᓯᑦᑎᓯᓐᓇᑕᑦᑎᓯᑦᑕ, ᐱᑦᑎᑦᑎᓯᑦᑕ, ᓄᓇᑦᑎᓯᑦᑕ ᓯᓐᓴᑕᐱᓯᐱᑦᑎᓯᑦᑕ ᐱᑦᐱᓯᐱᓐ
Renewable Resources, Environment, Lands and Parks Department
Service des ressources renouvelables, de l'environnement, du territoire et des parcs

IMPLEMENTATION REPORT – NUNAVIK RESIDUAL MATERIALS MANAGEMENT PLAN, 2015–2020

OCTOBER 2019

Table of Contents

Abbreviations 3

1. Introduction 4

2. Implementation Status – Measures under the Nunavik RMMP 2015–2020..... 4

3. Implementation Status – Expenditures 17

4. Implementation Issues..... 19

5. Conclusion 20

Tables and Figures

Table 1: Implementation status – measures under the Nunavik RMMP 2015–2020..... 5

Table 2: Costs for the implementation of the measures contained in the Nunavik RMMP 2015–2020..... 18

Figure 1: Implementation status of measures 15

Figure 2: Implementation status of measures by orientation 16

Appendices

Appendix 1: Report on work completed by Scout Environmental 21

Appendix 2: Quantities of products under extended producer responsibility recovered in participating communities (data provided by RMOs) 22

Appendix 3: Quantities of textiles recovered by the Wellness Centre in Kuujuaq 22

Appendix 4: Quantities of tires recovered from 2015 to 2018..... 22

Appendix 5: Quantities of refundable containers recovered from 2015 to 2018 22

Abbreviations

BGE: Boissons gazeuses environnement

CRD: construction, renovation, demolition

EPRA: Electronic Products Recycling Association

ICI: industrial-commercial-institutional

KI: Kativik Ilisarniliriniq

KRETC: Kativik Regional Employment and Training Committee

KRG: Kativik Regional Government

MELCC: Ministère de l'Environnement et de la Lutte contre les changements climatiques (environment and the fight against climate change)

NV: northern village

Nunavik RMMP: *Nunavik Residuals Materials Management Plan, 2015–2020*

QRMMP: *Québec Residual Materials Management Plan*

RMO: recognized management organization (certified by RECYC-QUÉBEC to manage a category of products covered by extended producer responsibility (RRRPE))

RRRPE: *Regulation respecting the Recovery and Reclamation of Products by Enterprises*

SHQ: Société d'habitation du Québec (housing corporation)

SOGHU: Société de gestion des huiles usagés (used oils management)

SPN: Société du Plan Nord

1. Introduction

The Nunavik RMMP 2015–2020 was approved by the KRG in 2015. Confirmed compliant with the QRMMP, it is in line with provincial objectives to reduce the volume of residual materials sent for disposal and to increase recovery rates. Although, in its capacity as a regional planning organization, the KRG is the author of the plan, in fact the Nunavik RMMP was developed in collaboration with the NVs (the infrastructure owners) to ensure the involvement of all regional stakeholders in its implementation. Residual materials management requires cooperation and partnership at various levels to permit it to be done safely and so that an ever-increasing portion of materials can be reclaimed.

The purpose of this implementation report is to present the work accomplished to implement the measures contained in the 2015–2020 plan and identify obstacles that caused delays in the proposed activities. It details the measures completed, in progress, ongoing and not achieved. Moreover, regarding measures not achieved, by reviewing the implementation issues experienced, the report sheds light on which measures should remain priorities for Nunavik and which require specific work to be implemented, and should therefore be carried over to the next Nunavik RMMP.



This analysis would not have been possible without the participation of the main stakeholders, i.e. the NVs, community residents and regional organizations, who are the generators of residual materials. This implementation report has therefore been widely disseminated and will be reviewed during public consultations planned in certain Nunavik communities. You are hereby encouraged to provide feedback on this implementation report, share your concerns and comments, and propose enhancements for the next Nunavik RMMP. This consultation exercise is intended to be transparent in order to deliver adequate information to the region on the state of residual materials management and to assess the issues identified by stakeholders. This work will be used to prioritize upcoming efforts since actual needs are multiple and major.



This implementation report supplements the Nunavik RMMP 2015–2020, outlining the status of measures, related expenditures, as well as issues that have led to implementation delays. For detailed information on the measures listed herein or for other information on residual materials management in Nunavik, readers should consult the Nunavik RMMP.




2. Implementation Status – Measures under the Nunavik RMMP 2015–2020





Table 1 contains a brief description of each of the 29 measures under the Nunavik RMMP and lists the lead organization, the planned timetable, the implementation status and, when applicable, comments. Pictograms illustrate the progress of each measure: refer to the legend that appears at the end of the table.




Table 1: Implementation status – measures under the Nunavik RMMP 2015–2020


Measures	Description	Lead	Timetable	Progress	Comments
Orientation 1 – Improve knowledge on residual materials management					
1.1 Enhance knowledge about residual materials management 	Gather more knowledge about the residual materials generated in Nunavik. Perform quantitative monitoring of residual materials through pilot projects.	KRG	2020	<p>The Chaire en éco-conseil produced a report on residual materials management in the north, including a series of recommendations to improve residual materials management in Nunavik.</p> <p>A characterization of residual materials was conducted at the landfill in Kuujuaq in the fall of 2017 by Stantec under an SPN incinerator project.</p> <p>No pilot project was implemented. It was therefore not possible to perform any quantitative monitoring.</p>	<p>The report is based on estimates of residual materials; however, the data is representative of the regional context and may be used for project planning.</p> <p>Residual materials recovery measures were implemented for which it would be interesting to compile quantitative data, such as:</p> <ul style="list-style-type: none"> - products covered by extended producer responsibility and hazardous materials; - textiles; - tires; - refundable containers.
1.2 Complete annual reports and a five-year overview 	Monitor implementation of the Nunavik RMMP.	KRG	Annual	<p>No annual report was prepared.</p> <p>The five-year overview enables qualitative assessment of the measures implemented over four years in order to better plan a revised Nunavik RMMP for the period from 2020 to 2027.</p>	The five-year overview follows the structure of annual reporting required by the MELCC from regional county municipalities for the implementation of residual materials management plans.



1.3 Conduct information campaigns 	Carry out information, awareness-building and education activities targeting the general public and the ICI sector to promote the behavioural changes needed to implement existing and new measures (ex.: refundable containers, tires).	KRG	Beginning in 2015 according to the category of residual materials	Three information, awareness-building and education campaigns were carried out in the six communities that set up drop-off stations for products covered by extended producer responsibility (2015–2016–2018).	Awareness-building activities for new measures implemented in these communities will be carried out for different clienteles.
Orientation 2 – Foster management methods applicable in Nunavik in line with the concepts of sustainable development					
2.1 Improve the management of community landfills 	Implement procedures and adjust the design of community landfills in accordance with the KRG guide (2013): <ul style="list-style-type: none"> - divide each community landfill into four zones; - assign a municipal worker to monitor access to the landfill and to perform sorting, compacting, burning and covering operations; - monitor surface runoff and leachates; - ensure maintenance of the landfill. 	KRG and NVs	2020	<p>A presentation of the KRG guide (2013) and the delivery of training to municipal landfill workers was prepared. This training was not carried out.</p> <p>The 14 NVs adopted bylaws concerning the use of community landfills and fees for ICI users.</p> <p>The only landfill compliant with the guide since the Nunavik RMMP came into force is the newly constructed landfill in Kangirsuk; it is not yet in operation. A new landfill is under construction in Inukjuak. In Kuujjuaraapik, the new landfill will be situated on Cree territory and has not yet been built.</p>	<p>The information in the KRG guide should be updated to include new requirements and new residual materials management methods introduced since the first edition (2010).</p> <p>The first new community landfill that will open for operation is located in Kangirsuk:</p> <ul style="list-style-type: none"> - storage sites for equipment and cover materials are planned; - the different zones are larger and more clearly separated.


<p>2.2 Implement an incinerator pilot project</p> 	<p>Carry out a feasibility study. Install an incinerator in a community (based on the study results).</p>	<p>KRG and one NV</p>	<p>2020</p>	<p>The SPN completed a pre-feasibility study in June 2019 for an incinerator project in Kuujuaq. The project is considered viable in terms of the volume of residual materials required and its thermal capacity. An appropriate technology was identified. Other funding will need to be secured for the feasibility study.</p>	<p>A characterization study was carried out in 2017 to better understand waste flow in Kuujuaq and the thermal capacity of these residual materials. Funding for the incinerator has not yet been secured.</p>
<p>2.3 Encourage the reuse of items through the delivery of labour force training in Nunavik</p> 	<p>Promote trades that foster the reuse of items through repairs and maintenance. Expand training that serves to extend the service lives of items in Nunavik.</p>	<p>KRG with the KRETC and the KI</p>	<p>2020</p>	<p>No reduction-at-source or reuse measures were undertaken.</p>	<p>The KRG and the KI requested funding in 2017 for household appliance repair training, but the request was rejected. A similar training project was organized in the past and no repair business was created through the initiative. The absence of an adequate workspace is a limiting factor.</p>
<p>2.4 Establish reduction-at-source and reuse protocols</p> 	<p>Propose reduction-at-source measures targeting the general public and ICI sector, including local authorities. Create environmental committees at the KRG and in the ICI sector. Assess the feasibility of municipal bylaws to promote reduction at source and reuse.</p>	<p>KRG</p>	<p>2020</p>	<p>Some NVs adopted bylaws prohibiting the use of plastic bags by local retailers. The bylaws are not however enforced in all these communities.</p>	



<p>2.5 Foster public awareness</p> 	<p>Conduct an awareness-building campaign on reduction at source.</p>	<p>KRG</p>	<p>2020</p>	<p>No reduction-at-source or reuse measures were undertaken.</p>	
<p>2.6 Implement selective collection (drop-off or home collection methods)</p> 	<p>Select a collection method: home collection or drop-off. Implement recycling collection pilot projects (paper and cardboard, glass, metal, plastics) in three communities of differing sizes. Introduce general sorting onsite. Create sheltered storage facilities at community landfills.</p>	<p>KRG and 3 NVs</p>	<p>2016</p>	<p>No pilot project was carried out. No collection method was selected and the recyclable materials to be collected were not identified. No northern villages were identified.</p>	<p>More urgent measures with more meaningful impacts on the volume of waste and levels of toxicity were prioritized. An amendment to compensation regulations now provides compensation for remote communities of not less than 70% of collection, shipping and processing costs for recyclable materials (containers, printed matter and packaging only). The remaining 30% must be assumed by the municipality.</p>
<p>2.7 Continue the community composting project in Kuujjuaq</p> 	<p>Maximize the spinoffs of organic materials composting by the ICI sector in order to increase processed volume throughout the year.</p>	<p>KRG</p>	<p>2016</p>	<p>This Kuujjuaq Greenhouse Project is supported by the Nunavik Regional Board of Health and Social Services, the NV of Kuujjuaq and the KRG.</p>	
<p>2.8 Foster household composting</p> 	<p>Promote the assembly and use of backyard composters by Kuujjuaq residents on a volunteer basis and knowledge sharing.</p>	<p>KRG</p>	<p>2016</p>	<p>No household composting measure was undertaken.</p>	



<p>2.9 Implement a rotating thermophilic composting pilot project</p> 	<p>Install a thermophilic composter in a community with the goal of reclaiming 385 t/year of organic materials by the third year of operation.</p>	<p>KRG</p>	<p>2017</p>	<p>A thermophilic composting project is under development and funding applications will be submitted in 2019 to permit the project to be implemented in 2020.</p>	<p>It is estimated that the composter will process approximately 2t/week of organic materials to meet the needs of the target community.</p>
<p>2.10 Changes to call-for-tender documentation regarding CRD residual materials</p> 	<p>Add clauses to call-for-tender documentation for CRD work to ensure related residual materials are returned to the south.</p>	<p>KRG and NVs</p>	<p>2016</p>	<p>The NV of Kuujjuaq received financial assistance from RECYC-QUÉBEC to carry out a CRD residual materials sorting project. The project began in 2018 and will be completed in the summer of 2019. It fosters improved planning with CRD companies.</p> <p>The KRG required the SHQ to add enhanced CRD residual materials sorting clauses to its calls for tenders for social housing renovation work. The majority of calls for tenders by the KRG contain similar requirements. Moreover, municipal bylaws prohibit the disposal of CRD hazardous waste at community landfills.</p>	<p>Household hazardous waste is stored in containers at the community landfill in Kuujjuaq. Also, a zone has been reserved for CRD residual materials so that they can be disposed of by category and according to the municipal bylaw (worksite sorting, separation of materials, signing of the landfill register, and payable fees). A barrel compactor and check station will soon be installed too. The municipal landfill worker explains the procedure to all CRD companies at the beginning of each season.</p>
<p>2.11 Adoption and application of municipal bylaws</p> 	<p>Amend municipal bylaws to require CRD companies to sort residual materials at community landfills and to pay for disposal.</p>	<p>KRG and NVs</p>	<p>2016</p>	<p>All the NVs have adopted bylaws concerning the management of CRD residual materials. Some NVs have already carried out revisions of their bylaws.</p>	



<p>2.12 Set up CRD zones at community landfills</p> 	<p>Identify zones at community landfills for different categories of CRD residual materials.</p> <p>Assign municipal workers to be onsite at landfills during set operating hours to guide CRD companies to dispose of their sorted residual materials properly.</p>	KRG and NVs	2016	<p>A municipal worker is onsite at the community landfill in Kuujuaq year-round during operating hours. This supervision permits better sorting of residual materials.</p> <p>Municipal workers are assigned responsibility for the community landfills in Kuujuaapik (since 2018) and Kangiqsujuaq (since 2019), but are not onsite full time.</p>	
<p>2.13 Continue to promote the reuse of textiles</p> 	<p>Develop partnerships with the not-for profit organizations in two communities that promote the reuse of textiles locally.</p>	KRG with the Wellness Centre in Kuujuaq and women's shelter in Inukjuak	Ongoing	<p>In 2017, the KRG purchased an industrial scale for the Kuujuaq Wellness Centre so that clothing and other materials could be weighed.</p>	Data for the past three years appears in Appendix 3.
<p>2.14 Develop a recovery procedure for hazardous materials contained in scrap refrigeration appliances</p> 	<p>Set up a system to recover halocarbons from scrap refrigeration appliances. Implement this recovery system.</p>	KRG and NVs Partners to be determined.	2020	<p>No hazardous materials recovery system for refrigeration appliances was set up.</p>	A halocarbon recovery servicer for refrigeration appliances was identified and a partnership could be negotiated for a cyclical community recovery program. Storage space and adequate funding must, however, be identified.
<p>2.15 Develop a scrap vehicle procedure</p> 	<p>Develop and implement a procedure for the withdrawal of vehicles from service, including the removal of hazardous materials and reusable parts, in six communities and with adequate funding.</p>	KRG and six NVs	2020	<p>A formal procedure for the safe withdrawal of vehicles from service is being drafted.</p> <p>Municipal workers in Inukjuak and Kuujuaapik remove hazardous materials from scrap vehicles at the municipal garage before they are</p>	Hazardous materials were removed from a number of scrap vehicles in Kangirsuk, Inukjuak and Kuujuaapik in 2016 and in 2017 by Scout Environmental. Municipal workers received training

				disposed of at the community landfills. Records have not been kept of the materials removed or the number of vehicles withdrawn from service.	and a guide was produced to encourage the transfer of these activities to other communities. The recovered hazardous materials were shipped or are to be shipped to recycling centres. (Refer to Appendix 1.)
<p>2.16 Set up storage zones for scrap appliances and vehicles (containing hazardous materials)</p> 	<p>Identify zones in community landfills or elsewhere to store these items until all hazardous materials can be removed. Once removed, ensure hazardous materials are stored properly while awaiting shipment to the south.</p>	NVs	2020	<p>No zones were identified for the storage of scrap appliances and vehicles containing hazardous materials. Other bulky items are also not stored separately.</p> <p>By 2020, all NVs will possess a facility or double-bottomed container for the storage of household hazardous waste.</p>	The separation of residual materials is not consistent from one NV to another.
<p>2.17 Conduct a scrap metal recycling pilot project</p> 	<p>Carry out a scrap metal recovery pilot project in Kangirsuk and another community.</p>	KRG and two NVs	Beginning in 2017	<p>The removal of hazardous materials from several scrap vehicles and household appliances was completed in 2016 in Kangirsuk and in 2017 in Inukjuak and Kuujjuaraapik by Scout Environmental (refer to Appendix 1 for the quantities processed). Removal work remains to be completed before the residual scrap metal can be compacted and shipped to a recycling centre in the south. A pilot project is being developed.</p>	<p>The purpose of this pilot project is to test a decontamination method for accumulated scrap metal at community landfills, followed by sorting, compacting and shipment to recycling centres.</p>

<p>2.18 Set up a storage facility for household hazardous waste in each community</p> 	<p>Identify secure storage facilities for household hazardous waste not covered by extended producer responsibility, while awaiting shipment to the south.</p>	<p>NV</p>	<p>In progress</p>	<p>There are secure storage facilities for household hazardous waste in most NVs. All remaining communities will receive a secure facility by the fall of 2020. In most communities, the areas are double-bottomed shipping containers; in Kangirsuk, Kangiqsujaq and Tasiujaq, the facilities are small garages.</p> <p>An eco-centre pilot project is being developed in one NV.</p> <p>In six NVs, products covered by extended producer responsibility (batteries, mercury lamps, used oils, paints, electronic devices) are recovered, stored and shipped south from time to time. In five NVs, the local drop-off station is managed by the Federation of Cooperatives of Northern Québec and, in Kuujjuaq, by the NV (refer to Appendix 2 for the quantities recovered).</p>	<p>Vehicle batteries in all NVs are stored and shipped to recycling centres in the south via TerraPure. This system permitted the recovery of 19,613 kg in 2014, 35,746 kg in 2015, 7,026 kg in 2016, 11,018 kg in 2017 and 36,000 kg in 2018.</p>
<p>2.19 Provide support to the NVs for the management of household hazardous waste</p> 	<p>Establish and disseminate information about procedures and the locations of household hazardous waste recovery sites. Conduct annual information, awareness-building and education campaigns.</p>	<p>KRG</p>	<p>In progress</p>	<p>A clean-up program for household hazardous waste collection sites is underway for the period 2018–2021. In 2018, clean-up was done in Kuujjuaq. In 2019, clean-up is underway in Kuujjuaraapik, Puvirnituq, Kangiqsujaq, Tasiujaq and Aupaluk. A characterization of stored household hazardous waste was prepared for the eight other communities.</p> <p>Hazardous materials shipment training was delivered to the northern villages and the KRG in 2015, 2017 and 2019.</p>	

				The KRG delivered training on the management of hazardous household waste and spills in 2016, 2017 and 2018. Close to 200 municipal workers and workers of other local and regional organizations participated. Guides were prepared with the assistance of the KEAC.	
<p>2.20 Monitor the implementation of RECYC-QUÉBEC programs regarding refundable containers and used tires</p> 	<p>Follow up with BGE to ensure that refundable containers have been properly processed and that retailers are reimbursed. Continue to implement the used tire return procedure in cooperation with RECYC-QUÉBEC. Ensure that separate zones for used tires are set up at community landfills.</p>	KRG and retailers	Ongoing	<p>All local cooperative stores have been recovering refundable containers since 2019. Used tires are shipped south regularly under the RECYC-QUÉBEC program.</p>	<p>Some NVs are not being reimbursed for their shipping expenses due to difficulties complying with RECYC-QUÉBEC administrative rules.</p>
<p>2.21 Monitor the implementation of the RRRPE</p> 	<p>Work with recognized management organizations to ensure the RRRPE can be properly applied. Ensure the creation of storage zones in all the northern villages for products covered by extended producer responsibility.</p>	KRG	Begun in 2015	<p>Five local cooperative stores are official drop-off stations for five categories of products covered by extended producer responsibility. The NV of Kuujjuaq operates a station at the community landfill.</p>	<p>The recovery rates for this service are low. Improvements need to be made. The service will eventually be offered in all the northern villages.</p>
Orientation 3 – Deliver regional support to the northern villages for measures implemented to achieve objectives					

<p>3.1 Work with the ICI sector and the NVs to ensure support for, monitoring of and partnership on residual materials management</p> 	<p>Prepare an annual inventory of residual materials generated in the region. Provide support to the NVs for pilot projects and the construction of residual materials management infrastructure. Act as a liaison between stakeholders involved in the implementation of the Nunavik RMMP.</p>	KRG	Ongoing	<p>The KRG offers technical and financial support for the construction and development of new residual materials management infrastructure. It also liaises between stakeholders (non-profit organizations, recognized management organizations, provincial and federal governments) and works closely with the ICI sector, in particular regarding contaminated soil management and products covered by extended producer responsibility.</p> <p>No annual inventory has been prepared, but a characterization of waste was performed in Kuujuaq in 2017.</p>	<p>It is almost impossible to collect data on residual materials due to the absence of scales and other measurement tools at community landfills. In order to improve the monitoring of types and volumes of residual materials, other monitoring methods must be developed.</p>
<p>3.2 Work with the generators of residual materials to ensure their participation and compliance with municipal bylaws</p> 	<p>Ensure the participation of regional stakeholders in the implementation of measures under the Nunavik RMMP. Disseminate the Nunavik RMMP. Ensure compliance with and the application of existing bylaws. Develop new bylaws.</p>	KRG	Ongoing	<p>The Nunavik RMMP is posted on the KRG website and was subject to public consultation prior to coming into force. Residual materials management bylaws have been adopted by all the NVs. Application of these bylaws varies from one NV to another. The KRG provides support to the NVs for bylaw enhancements and implementation.</p>	
Orientation 4 – Maintain residual materials processing and management costs at economically and socially acceptable levels					
<p>4.1 Identify funding sources</p> 	<p>Assess possible funding sources for all measures under the Nunavik RMMP.</p>	KRG	2015	<p>Programs involving free services were set up for the NVs, such as tire recovery, refundable containers and products covered by extended producer responsibility. Other projects are being developed and complementary external funding sources have been identified.</p>	

4.2 Negotiate reduced shipping charges 	Reach an agreement with sealift companies concerning reduced rates for the shipment of residual materials to the south.	KRG	2015	No agreement was reached between the KRG and sealift companies concerning rates for the shipment of residual materials to the south.	
4.3 Select measures in line with strategies and actions under the QRMMP 	After an assessment of scenarios, select the measures most likely to fulfil the recovery objectives under the QRMMP.	KRG	Ongoing	As no scenario assessment has been performed, no selection has yet been carried out.	

Legend:



Measure implemented



Measure in progress



Measure ongoing



Measure not achieved

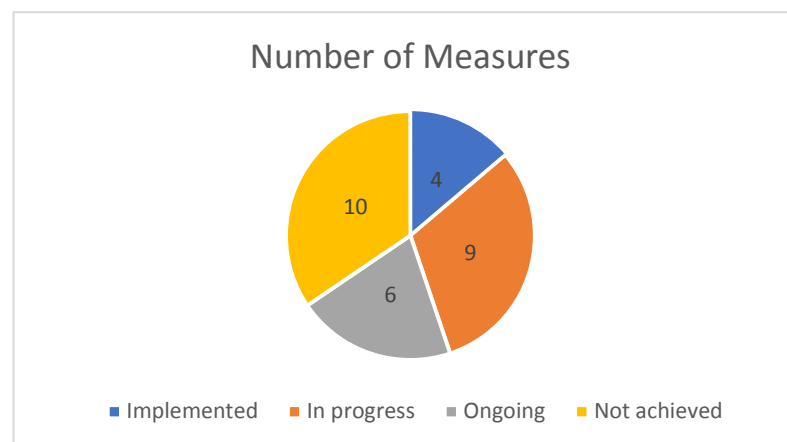


Figure 1: Implementation status of measures

Status of measures by orientation

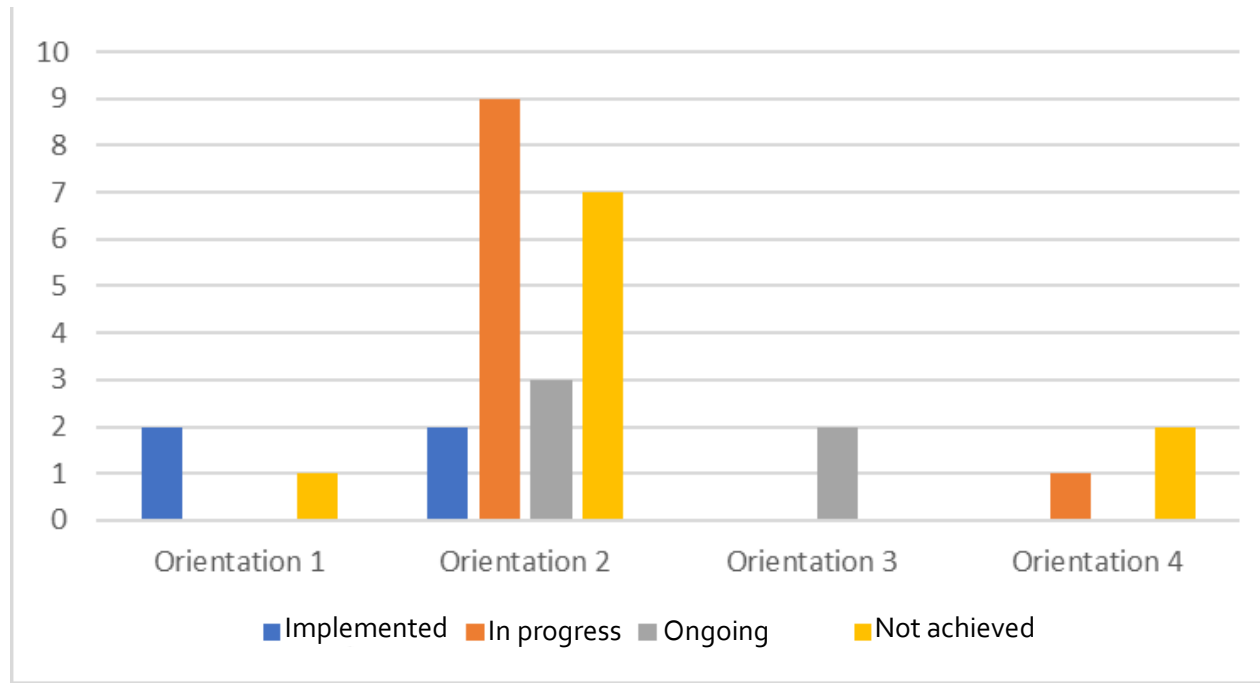


Figure 2: Implementation status of measures by orientation

3 Implementation Status – Expenditures

It is not possible to precisely calculate expenditures related to the implementation of the measures contained in the Nunavik RMMP because no detailed record has been kept consistently. Some expenditures have been covered by the KRG, such as technical assistance and training delivered to the NVs, and other expenditures by the NVs themselves, such as the processing of certain residual materials for shipping (ex., products covered by extended producer responsibility and used tires) and the setting up of designated disposal zones at some community landfills.

In addition, financial assistance was received from the SPN for the recovery of hazardous materials in all the communities between 2018 and 2021 (\$3 million). Financial support from RECYC-QUÉBEC also permitted the implementation of a project to improve sorting practices for CRD waste at the landfill in Kuujuaq in 2018–2019 (\$166,246). In 2016–2017, Scout Environmental was contracted to deliver training in three communities on how to decontaminate scrap vehicles at a cost of \$295,000. Three feasibility studies at a cost of \$39,000 are underway regarding the implementation of residual materials management pilot projects in different communities beginning in 2020 (funding application submitted to the Green Municipal Fund).

Table 2 shows the costs for the implementation of the measures contained in the Nunavik RMMP 2015–2020.

Table 2: Costs for the implementation of the measures contained in the Nunavik RMMP 2015–2020.

Orientations		Objectives		Measures			Total costs	
1)	Improve knowledge on residual materials management	a)	Improve knowledge	• Quantify materials • Complete annual reports and a five-year overview			\$0 ¹	
		b)	Awareness and education	• Information campaigns			\$101,185	
2)	Foster management methods applicable in Nunavik in line with sustainable development concepts	a)	Improve landfill management	• Separate zones • Operators • Fence repairs • Basic operations • Leachate control • Monitoring of burning			\$4,283,930	
		b)	Modify burning methods	• Incinerator pilot project (conditional on feasibility study)			\$1,129,000	
		c)	Reduction at source and reuse	• KRG and ICI sector environmental committees • Reduction at source measures: offices and municipal garages • Public awareness			\$0 ¹	
		d)	Selective collection	Selective collection (recyclables)	• Scenario 1: Drop-off bins			\$1,418,802
					• Scenario 2: Home collection			\$1,403,702
				Composting	• Pile composting (Kuujuaq Greenhouse Project)			\$210,000
					• Rotating composter pilot project			\$642,001
				CRD	• Call for tender changes • Set-up of zones in landfills			\$0 ^{1 and 2}
				Wastewater sludge	• No measure for another 20 years			\$0
				Textiles	• Partnerships with non-profit organizations			\$0 ¹
				Halocarbons	• Develop procedure for halocarbon recovery (for all villages)			\$308,100
					• Set up storage zones in the villages or at landfills			\$0 ²
				Vehicles	• Develop a scrap vehicle procedure (for six villages)			\$401,592
				Scrap metal	• Scrap metal recycling project (for two villages)			\$3,624,829
		HHW	• Storage zones for all villages • KRG support for all villages • Monitoring of implementation of the RRRPE • Information campaign			\$0 ^{1 and 2}		
			• Protocol for the shipping of refundable containers • Public awareness campaign (refundable containers) • Support for retailers (refundable containers) • Maintain funding and the implementation of the procedure for tire recycling • Set up tire recovery zones in landfills			\$0 ^{1 and 2}		
		Recovery programs (refundable containers and tires)						
e)	RRRPE implementation	• The KRG Environment Section will coordinate the implementation of the RRRPE with the associations of producers			\$0 ¹			
3)	Deliver regional support to the northern villages for measures implemented to achieve set objectives	a)	Establish partnerships with the ICI sector for residual materials management	• The KRG Environment Section and the Municipal Public Works Department will work with the ICI sector and the northern villages to ensure support, monitoring and partnership regarding residual materials management.			\$149,000	
		b)	Create municipal and regional by-laws that support achievement of objectives	• The KRG Environment Section and the Legal, Socio-Judicial and Municipal Management Department will work with the northern villages to ensure the adoption of by-laws based on residual materials management objectives.				
4)	Maintain residual materials processing and management costs at levels that are economically and socially acceptable	a)	Identify objective and quantifiable parameters for establishing the financial feasibility of measures	• Identify funding sources	• Negotiate the reduction of shipping charges	• Selection of measures in line with strategies and actions under the QRMMP	\$0 ¹	
Total							\$12,261,216	

¹ = The costs of these measures are included in the costs of regional follow-up to be performed by KRG staff (Orientation 3).

² = The costs of these measures are included in landfill management improvement initiatives (Objective 2 a)).

4 Implementation Issues

Certain issues have hindered the implementation of some measures. They are outlined in this section in order to find solutions that could be included in the next Nunavik RMMP 2020–2027, and in order to help prioritize measures in the next plan.

- 1- Difficulty securing funding for the implementation of measures.
- 2- Existing funding programs that do not take into account the Nunavik context, in particular constraints related to sea transport.
- 3- Inability to increase taxes (taxes are already at a maximum level).
- 4- Lack of human resources to develop and implement projects, and maintain onsite operations.
- 5- Lack of funding for community landfill operations.
- 6- Need for an onsite municipal worker at each community landfill during operating hours to control access, compliance with bylaws, as well as the sorting and storage of residual materials.
- 7- Difficulty complying with the provincial regulations applicable to landfills (fenced perimeters, drainage ditches, operating hours, regular covering activities, etc.) due to the absence of an onsite worker and equipment, and a shortage of cover materials.
- 8- The practices of residents and CRD waste generators who visit their community landfill at any hour, who do not properly sort their residual materials, who do not dispose of their residual materials in the designated zones, and who scavenge residual materials left at the landfill.
- 9- The very short construction, renovation and demolition season (May to November), which places enormous pressure on landfills and requires intense efforts on the part of the NVs.
- 10- Sea transport as the only method for shipping residual materials:
 - a. set schedule with rare visits;
 - b. from June to November only;
 - c. very high service costs;
 - d. strict methods for processing residual materials for transport;
 - e. further complexity applicable for hazardous materials.

5 Conclusion

This report describes the status of implementation of the measures contained in the Nunavik RMMP as of 2019. It also identifies a series of issues that have constrained efforts to translate the plan into concrete actions over the past four years. This transparent and inclusive analysis has been made public in order to permit Nunavik stakeholders (residents and organizations) to review the information and provide feedback to the KRG.

Public consultations will be organized regarding the implementation of the Nunavik RMMP in the following communities in October 2019:

- Kuujuaq
- Kangirsuk
- Inukjuak
- Kuujuaaraapik

For residents and organizations in other communities, feedback and suggestions may be transmitted to the following email no later than November 8, 2019:

enviro@krg.ca

Following this exercise, a public consultation report will be disseminated to share the feedback received. The result of this report and the findings of the public consultations will serve as the basis for a revision of the Nunavik RMMP. It is expected a new Nunavik RMMP will be proposed in 2020 for adoption by 2021.

For any questions regarding this process, contact the KRG Renewable Resources, Environment, Lands and Parks Department by telephone at 819-964-2961.

Appendix 1: Report on work completed by Scout Environmental

Scout Environmental teams were mobilized for approximately two-week periods in each of the following three communities. The quantities of residual materials processed were:

	Kangirsuk (2016)	Inukjuak (2017)	Kuujuaraapik (2017)
Residual materials processed:			
Vehicles:	72	35	87
Heavy equipment:	15	18	9
Household appliances:	15	-	12
Residual materials recovered:			
Vehicle batteries:	40		15
Mercury switches:	12	6	3
Lead parts (connectors, weights):	20 lbs	1 gallon	1.5 gallons
Used oil:	7 barrels	4 barrels	1.5 barrels
Fuel:	7 barrels	3 barrels	1.5 barrels
Antifreeze:	2 barrels	1 barrel	0.5 barrel
Windshield washer fluid:	1 barrel	1 barrel	0.1 barrel

Appendix 2: Quantities of products under extended producer responsibility recovered in participating communities (data provided by RMOs)

Northern village /RMOs	EPRA (electronic products)	Call2Recyle (batteries)	RecycFluo (mercury lamps)	SOGHU (oils, antifreeze, filters and containers)	Éco-peinture (paints)
Kuujuaq	3,592 kg (2015) 3,600 kg (2017)	91 kg	240 4-ft tubes 16 8-ft tubes 17 compact fluor. lights 3 DHI	46 barrels of oil 2 barrels of containers (2015)	2,436.5 kg (2018)
Salluit				2 barrels of filters 4 barrels of glycol (2015)	
Kuujuaaraapik				23 barrels of oil 1 barrel of glycol (2015)	
Puvirnituq	1,638 kg (2015)				

Appendix 3: Quantities of textiles recovered by the Wellness Centre in Kuujuaq

	2016	2017	2018
Textiles recovered (kg)	4,491.07	13,187.72	13,862.56
Loss (%)	25	21	22
Total (kg)	3,371.35	10,367.95	10,777.81

Appendix 4: Quantities of tires recovered from 2015 to 2018

	2015	2016	2017	2018	TOTAL
Mass (kg)	46 460.00	33 650.00	54 908.00	27 040.00	162 058.00
Car tires (unit)	2 930	1 675	3 182	1 300	9 087
Truck tires (unit)	330	325	444	270	1369

Appendix 5: Quantities of refundable containers recovered from 2015 to 2018

	2015	2016	2017	2018	SOUS-TOTAL	TOTAL
FCNQ (unit)	2 520 488	3 315 987	3 659 504	3 640 180	13 136 159	14 374 495
Newviq'vi (unit)	150 000	387 811	362 214	338 311	1 238 336	