

The logo for Springboard, featuring the word "Springboard" in a green, sans-serif font. The letter "b" is stylized to resemble a stack of three green leaves or petals.

In Collaboration with

The logo for econext, featuring a green square icon with a white stylized "E" shape inside, followed by the word "econext" in a green, sans-serif font.

IDENTIFYING VALUE FROM WASTE INNOVATION
KEY FINDINGS REPORT – JUNE 2022

PAT CURRAN + ASSOCIATES INC.

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1. Background to Project

In early February 2022 Springboard Atlantic Inc. engaged econext to determine opportunities to identify value from waste across four primary resources sectors within Atlantic Canada including fisheries, aquaculture, forestry, and agriculture. In turn, econext contracted Pat Curran + Associates (PCA) Inc., a Newfoundland and Labrador-based management consultancy, to lead the assessment. The intent of the project was to identify waste management challenges faced by these sectors and the potential role of research and development (R&D) in addressing these challenges by extracting value from waste streams. The scope of work included extensive stakeholder engagement through interviews with industry, the preparation of a summary report on value from waste opportunities, the evaluation of potential challenges including the development of an evaluation matrix and prioritization of challenges, the drafting of potential “challenge” statements to guide potential Springboard engagement in R&D on behalf of industry, vetting of challenge statements with industry and institutions, and finalization of challenge statements.

The project began with a commencement meeting among project partners and in February 2022, the preparation of a draft and final interview template and the development of a targeted list of key informants. The objective was to complete 25-30 industry-based interviews throughout the Atlantic region across the four targeted sectors. The results of these interviews would be reflected in a key findings document prior to preparation of the draft and final challenge statements, and the final report from the project.

2. Consultative Methodology

The agreed methodology during the consultative stage included the following:

- Identify key indicators
- Prepare interview template
- Identify key informants
- Prepare communications plan to support industry stakeholder engagement
- Conduct interviews x 25-30

Key Indicators and Interview Template

Key indicators included the following:

- Waste streams and the top 3-5 waste management challenges facing the company and/or industry sector
- Scale of these challenges including volumes of each waste stream and whether the challenge is local, provincial, or Atlantic-wide
- Potential value from waste streams identified
- Current costs for disposal by company and industry sector

- Current practices in relation to disposal of waste
- Suggestions on addressing waste challenges
- Carbon reduction potential within waste stream identified
- Role of and interest in engaging R&D to address waste challenge

Following consultation with econext and Springboard Atlantic, PCA prepared a draft and final template reflecting key indicators to guide the interview process. A copy of the interview template is attached as **Appendix A**.

Communications Plan

To support stakeholder engagement in the interview process, PCA prepared an introductory email introducing the project and the opportunity to engage. This email highlighted key messaging reflected within the interview template, explaining the intent of the project, and requesting an opportunity to arrange an interview. A notional listing of interview targets was prepared and reviewed by econext and Springboard Atlantic. A copy of the Interview Request email is attached as **Appendix B**.

Interview Process Overview

An initial distribution of the email and interview template as an attachment was distributed on February 24, 2022, with follow-up emails on March 6, 2022, and March 18, 2022. A key contact at the Atlantic Canada Opportunities Agency (ACOA) was identified by Springboard to identify potential informants based on past ACOA activity on commercial R&D in waste. This contact in turn led into several interviews with ACOA account managers throughout the region. In most instances, these in turn led to direct industry contacts and follow-up interviews. Additional input on interview targets was provided by econext on several occasions, following concern raised by PCA in late March 2022 over industry uptake, particularly within the maritime region and the agricultural sector.

PCA has been challenged in securing direct industry engagement in interviews throughout the region. To supplement ongoing industry engagement efforts, PCA attended an Organics Waste to Value Forum on April 22, 2022, led by the Harris Centre at Memorial University. From engagement in this session, PCA identified and completed additional interviews. The timeline for completion of interviews had been extended by agreement with econext and Springboard Atlantic.

2. Overview of Responses

Interviews Completed

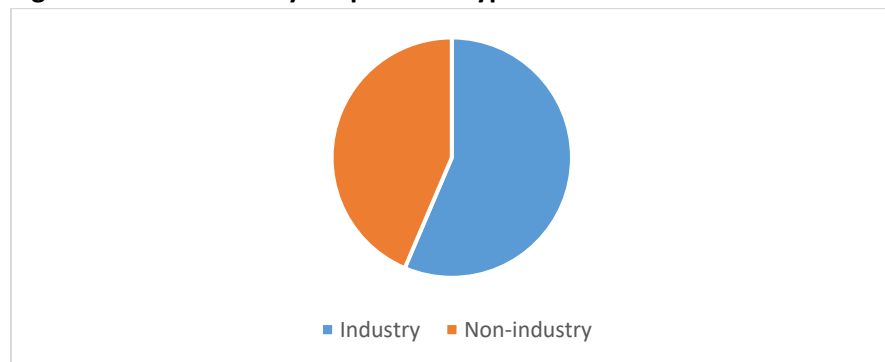
PCA completed thirty-nine interviews, twenty-two of these with direct industry stakeholders comprising either producers or industry representatives, and an additional seventeen interviews with other stakeholders including municipal, provincial, and federal agencies, and research institutions. A further

eight interview contacts either declined an opportunity to participate or did not respond. A complete listing of interviews completed to date is provided as **Appendix C**.

Interviews by Industry/Non-Industry

Figure 1 below highlights the distribution of completed interviews between industry and non-industry respondents.

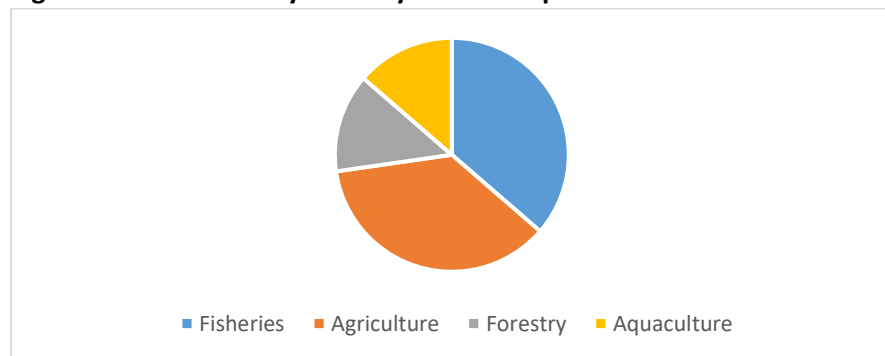
Figure 1 – Interviews by Respondent Type



Interviews by Industry Sector

Of the completed industry interviews, eight (8) are from fishery-related stakeholders, eight (8) from agriculture, and three (3) each area from forestry and aquaculture. Figure 2 highlights the distribution of completed industry interviews by sector.

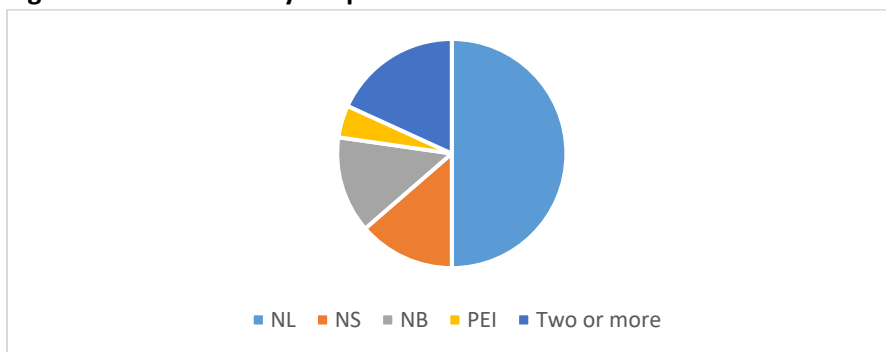
Figure 2 – Interviews by Industry Sector Respondent



Interviews by Province

Of the completed industry interviews, eleven (11) are from Newfoundland and Labrador, three (3) are from Nova Scotia, and three (3) are from New Brunswick. One (1) respondent is from Prince Edward Island. An additional four (4) respondents have activities ongoing in two or more provinces or alternatively, lent a perspective that encompassed more than a single province. Figure 3 below highlights the distribution of completed industry interviews by province.

Figure 3 – Interviews by Respondent Province



3. Waste Challenge Highlights

Waste Challenges by Sector

The top waste challenges in each sector are highlighted in **Table 1** below. included the following:

Table 1 – Waste Challenges by Sector

Fishery
Crab/shrimp/lobster shell by-product
Fish waste by-product
Plastic
Agriculture
Plastic
Dead stock
Forestry
Bio-mass
Pulp sludge
Ash
Value chain optimization
Steam and heated water
Aquaculture
Plastic
Fish waste by-product
Hatchery sludge

Cross Sectoral Challenges

Plastic

Three (3) of the four (4) sectors highlighted plastic waste as a challenge, particularly within the agriculture and aquaculture sectors but also within the fisheries sector. In agriculture, plastic waste is derived primarily from silage wrapping and baling activities and constitutes a significant volume of

plastic. This issue is common across each of the four Atlantic provinces. In aquaculture, plastic waste is derived from multiple sources, but the primary concern is in relation to feedbags for fish pens and hatcheries. Other sources of plastic include cage netting, rope and so on, however, the transition to newer cage technology will extend the replacement interval of cage netting, lessening overall volumes over time. At least one significant Atlantic producer is moving toward elimination of plastic waste by 2025.

Fish Waste

Both the fisheries and aquaculture sectors produce significant volumes of by-product in relation to heads and frames, offal, and crab and lobster shells from fish processing, and in the case of aquaculture, fish mortality (morts) during the grow-out phase of production, along with periodic and significant volumes of dead fish through disease or other large-scale mortality events. There is, however, a ready market for heads and frames from both fish and aquaculture production. In shellfish there are significant volumes of by-product varying from 35-60% of landed yields depending on the species. Depending on the jurisdiction, this waste stream is addressed through either landfilling or ocean dumping.

Other Challenges

A number of respondents, whether direct industry or other stakeholders, identified additional challenges in defining, developing, and addressing their respective waste streams. Many cited access to data and regulatory considerations as challenges.

Access to Data

Concern exists over understanding of waste volumes and related data, particularly on a local or regional basis. A better understanding of waste volumes and related data would help guide and enable more detailed planning and feasibility assessment.

Regulatory Considerations

The current regulatory environment often discourages full utilization of the industry by-products; for instance, pulp mill ash and sludge can be used for soils enhancement and would allow producers to dispose of the waste with minimal expense, particularly in crab and shrimp shell by-product. However, due to current regulations, ph. levels in pulp ash current limit its use as a soil enhancement.

Cross-Industry Engagement

Several respondents identified the need for a more holistic/less silo-based approach to addressing waste in the primary resource sectors. There appears to be significant opportunities for engagement on waste

to value across industries; from soil enhancement in agriculture through use of crab shell and pulp ash, to helping define volume and scalability on plastic waste.

4. Detailed Assessment of Waste Challenges

Fishery

Plastic

As noted, and depending on the jurisdiction, plastic waste has been identified as a key issue in the fishery industry. Plastic waste in the fishery can be defined as rope, netting, and to a lesser extent, packaging materials. Much of this waste is currently being disposed of in regional landfills; however, in at least one region in Newfoundland and Labrador, landfills are either a) refusing to accept rope and netting or b) imposing a tipping fee by distinguishing between this waste stream and existing commercial waste streams. Tipping fees currently run to \$127/ton.

Significant volumes annually have been acknowledged but there are no estimates of amounts. In addition, there appears to be a significant stockpile of plastic waste from previous years.

Crab, Lobster and Shrimp Shells

There is a large volume of crab shell by-product, acknowledged to be between 47-70% of landed volume. In Newfoundland and Labrador alone, the Total Allowable Catch (TAC) in 2022 is 50,470 tons, resulting in somewhere between 23,720-35,329 tons of crab shell by-product. Nova Scotian estimates would add a further 4,500-5,000 tons of crab shell by-product to these totals. Current crab production and markets emphasize crab sections, meaning the carapace (body) is of limited market value, and discarded. Much of the volume of shrimp TAC is processed at sea, particularly among the offshore sector, and shells are discarded in the production process.

The primary waste management challenge with shells is the seasonal nature of crab and shrimp production, which is concentrated over a 12-14 week period, resulting in an abundance of by-product which would need to be frozen and stored in the interim. With production facilities distributed throughout the Atlantic region and in Newfoundland and Labrador, in many locations along the northeast coast, the geographic dispersal of production facilities implies significant, and increasing, transportation costs to a centrally located production facility. The crab and shrimp sectors are highly competitive which is a disincentive to collaborative approaches among industry on waste to value initiatives, particularly in amassing access to volume of by-product. Storage, freezing and transportation costs would have major implications. These might be addressed using in situ technology immediately after the production and processing stage. Local company 3F Waste Recovery has IP developed a pre-commercial stage that might provide an in situ solution and is actively engaged in discussions with processors on access to waste by-product supply.

The current regulatory environment on crab and shrimp shells does not compel industry to do anything other than dump at sea. There is currently no regulation against ocean dumping, unlike in other countries such as Scotland, where R&D is underway to address the issue of the high disposal cost of crab shells at landfills. Many respondents suggested that a regulatory change prohibiting ocean dumping might be required as an incentive for waste to value initiatives.

More info on shell usage:

- <https://link.springer.com/book/10.1007/978-3-030-16538-3>
- <https://www.cbc.ca/news/canada/nova-scotia/cape-breton-university-researchers-snow-crab-waste-1.5384576>
- <https://www.seafoodsource.com/features/turning-processing-waste-into-profit>
- <https://www.bizjournals.com/seattle/inno/stories/news/2022/04/06/tidal-visions-bellingham-crab-shells-water.html>

Other Fish By-Product

In Newfoundland and Labrador, the TAC of 10,000 tons of cod for 2021 in 3J3KL resulted in an estimated 2,000 – 3,000 tons of cod liver (and other gut material) that is currently being discarded in the ocean. In addition, there is an undetermined volume of heads and frames from groundfish production, including the recreational cod fishery. Some fish processing companies are aiming for, and even approaching, an ideal target of 100% utilization; but that goal may not be currently feasible across the sector. Challenges include coordination, as well as shipping, storage and freezing of waste products.

Aquaculture

Plastic

Plastic is the biggest waste challenge in the aquaculture sector, particularly feedbags. Some companies have identified addressing the plastic waste stream as a priority by 2025. One Newfoundland and Labrador producer identified one hundred tons/year of feedbag waste comprising forty-eight tons of bulk bags and fifty-two tons of fifty kilo bags. Waste recovery facilities in the Coast of Bays area in Newfoundland and Labrador are no longer accepting the bags so they must be transported from the region to the Norris Arm landfill site in Central Newfoundland, where it is stored. Tipping fees and transportation costs are a definite consideration. Norris Arm accepts this waste in baled format, but no balers were available commercially within the last year or so due to supply chain issues arising from COVID 19. Grieg's Placentia Bay operation uses a different model where suppliers reuse the feedbags so there is no complimentary waste stream there between the Placentia Bay and Coast of Bays sites.

There has been some engagement with Memorial University for conversion of feedbags into a bio-fuel. The project is ready to transition into development stage but there is a need for an Environmental

Registration and an Environmental Preview Report (EPR), along with a project lead. Resources for the EPR are still required.

Beyond feedbags, other plastic waste is a problem. The aquaculture industry reports significant volumes of mixed plastics stockpiled in the Coast of Bays area in Newfoundland and Labrador comprising floats, rope, old cage netting, etc. Mixed material composition of different plastic types would require cleaning, sorting, and ongoing storage.

Morts and Discards

In Newfoundland and Labrador, waste from heads and frames (discards) and morts (in-pen mortalities) are addressed through pet food/meal production locally, and at Burgeo. There is a ready market for these materials. Some materials are going to composting operations at New World Dairy in Bay St. George's to support their anaerobic digester technology. Volumes can run to 15-20% of production volume, but the waste stream is presently managed, although not necessarily at maximum value. Significant die-offs are an issue, but it is difficult to build a business case around that given these events are unplanned and when they do occur, vary considerably in terms of volumes of fish affected.

An emerging challenge is in terms of projected industry growth in Newfoundland and Labrador to 50,000 tons annual production. Current producers will be unable to manage that volume of discards and morts within current capacity. This might be addressed through expansion, but there are opportunities to explore other options for utilization of this waste stream.

Challenges include industry coordination, and shipping, storage and freezing of waste products.

Hatchery Sludge

There is an emerging volume of sludge from hatchery production, discharged as part of effluent within wastewater. Sludge composition includes organic material from feed and fish waste. This waste stream is presently dealt with through industrial disposal contractors; however, increasing volumes will increase costs and there appears to be limited consideration of value from this waste stream. There is potential in utilizing this waste stream in agricultural applications as a soil enhancement.

Forestry

Biomass Utilization

There appears to be an opportunity for utilization of residual wood materials from forestry operations as biomass for energy production, particularly in New Brunswick with the anticipated conversion of the Belledune Coal Generating Plant. There appears to be a significant volume of treetops, small trees, and branches remaining after harvesting operations, but no firm sense of volume is available within, and

across jurisdictions. Estimates would suggest the volume is in the 100's of tons per year in Newfoundland and Labrador alone.

In addition, the pulp and paper and sawmilling sectors are producing significant volumes of residual materials including saw dust, chips, fiber, and ash that might also supplement bio-mass fuel production.

Pulp Sludge

Within the pulp mill sector, sludge represents a significant waste stream. Pulp and paper mill sludge (PPMS) is the main organic residual generated from the wastewater treatments of the pulp and paper industry. In Newfoundland and Labrador and Nova Scotia, sludge is being used as an energy source at the plants' co-generation facilities, and in Nova Scotia, some is going to a company-owned landfill.

Port Hawkesbury Pulp and Paper identified an emerging challenge with this waste stream as its landfill is currently approaching capacity. Pulp sludge is characterized as two types: primary sludge comprises small wood fibers, and secondary sludge, estimated at 70 – 80 tons (wet)/year, comprises other organic material i.e., bugs etc. There is a high moisture content of 50-60%, so drying may be required for successful diversion. Potential opportunities include use of the sludge as packaging or shipping material or greater utilization as for bio-mass/co-generation energy production, such as what is occurring at the Corner Brook Pulp and Paper Mill (CBPP). There is also a significant volume of sludge material already onsite at the landfill, estimated at 3 sq. acres x 20 feet of depth, which might be harvested and repurposed.

Value Chain Optimization

There appears to be an emerging opportunity in forest value chain optimization. "Chain of custody" in relation to the European market for reduced carbon emissions will compel producers to lower fuel consumption through trucking/fleet optimization to meet carbon reduction objectives.

Wood pellet production is a relatively recent addition to the forestry sector, providing a value-added product and diversifying the sawmills' product lines.

Pulp Ash

Pulp plant ash is another waste stream associated with the forestry sector. Pulp and paper mill fly ash (PPFA) is often treated as a nonhazardous commercial waste product and is landfilled at a cost to producers and to society at large. In Newfoundland and Labrador, usable ash is estimated at 3,000 tons/year with a Ph. content of 50%. There is potential for its use as a soil enhancement in agriculture; however, the current regulatory environment prohibits this due to ph. levels.

Hot Water/Steam

In Newfoundland and Labrador, pulp operations at Corner Brook produce enough steam to meet a Corner Brook district energy plan – resulting in an estimated 10,000 tons of carbon reduction annually. On hot water, there is a significant volume of heated water between 30-35 degrees Celsius going into the Bay of Islands daily that is currently not being utilized.

Agriculture

Plastics

Plastic waste is an issue for all agricultural sub-sectors, particularly in dairy, but others as well. Plastics include hay bales and silage coverings or “ag bags” with a significant volume annually. These products provide feed storage solutions and are widely used across North America by a variety of different farming and ranching operations.

Other Inorganics

Other than plastics, inorganic farm and agricultural waste include tires, used fuel, agricultural sharps, chemical containers and so on. These are addressed through various waste stream collection and disposal measures already in place.

Dead Stock

In dairy, there is a common challenge throughout the region in relation to “dead stock.” This is addressed in several ways through burial onsite or through collection arrangements, particularly in PEI through PEI Waste Watch.

Non-Market Produce

Industry has adjusted well in the area of non-market produce. Non-market potatoes are being processed and there is an increasing movement for unused/non-commercial grade vegetables and fruit to be distributed through food banks or as donations.

Manure

The use of manure for fertilizer is being maximized across all sectors.

5. Other Considerations

Regulatory Considerations

In general, regulatory considerations appear to be impacting the fuller utilization of primary resource industry by-products across all sectors. In crab and shrimp shell by-product, lower cost ocean dumping is seen as a regulatory disincentive to fuller utilization. In the pulp sector, the lack of ash use as a soil enhancement in agriculture is a result of regulatory considerations. In forestry, significant volumes of fiber by-product remain on the forest floor after harvesting operations as part of provincial forestry management plans.

Current policy and regulatory considerations are limiting opportunities and an understanding of potential volumes. There is an opportunity to engage industry partners and government in a discussion on the regulatory environment, and a need to consider how other jurisdictions are compelling greater utilization of by-product.

Data

Access to reliable data within and across jurisdictions is a challenge, particularly data that may be reflected on a regional basis to better enable cost/benefit analysis and feasibility assessment. There are no firm data sets across provinces or sectors on by-product volumes – the data appears to exist, it is just not being aggregated, configured, and analyzed. There is a significant opportunity or need to map waste and by-product volumes and assets and overlay these with potential development sites and opportunities, i.e., Port of Belledune and NB Hydro plant coal conversion. There is an opportunity to address the following key questions:

- Is the volume there?
- Is the technology there?
- Is the technology scalable up/down?
- Is there a critical mass?

Role of R&D

There is general agreement that R&D may help address some of these opportunities however there is recognition that a) other jurisdictions may have already developed and commercialized approaches that have not yet been adopted in Atlantic Canada and b) that there has already been significant investment in R&D on a number of these issues. This would suggest a need for either a greater focus or awareness of potential technology transfer from other areas, greater sharing and awareness of previous research activities undertaken within the region, and a commitment to invest in commercial-scale solutions.

In some instances, there may already be commercially viable options available. In others, the opportunity may have already been assessed and the R&D solution was found to be unfeasible. In still others, the solution may have been deemed feasible, but it has not moved forward to adoption or commercialization.

Carbon Reduction

To the extent that further carbon reduction objectives are imminent, industry will have to apply a carbon reduction lens to both its ongoing operations and its waste stream. Value chain initiatives such as those emerging in the forestry sector will position carbon use as a waste stream. The same might be said for the fish harvesting sector in terms of vessel conversion to meet a Tier III emissions standard. Given the costs around drying, transportation and storage of by-product in some sectors, carbon reduction objectives would suggest a need to consider dealing with waste streams at source.

6. Conclusion

Springboard Atlantic and econext have undertaken an assessment of value from waste opportunities in the primary resource sectors within the Atlantic region including fishery, forestry, agriculture, and aquaculture. This report provides an overview of key findings from interviews with industry and others.

PCA has been challenged in determining specific waste volumes for each waste stream. Respondents have often provided anecdotal evidence to support waste volumes, and this is compounded by a scarcity of reliable and accessible data on a sector by sector, or waste stream by waste stream basis.

With the key findings report completed, and in line with the agreed scope of work, PCA will next transition into preliminary challenge statement development, with draft challenge statements presented to Springboard Atlantic and econext for review by the end of June 2022. Following input, PCA will prepare final versions of the challenge statement and conclude the project, notionally by late July 2022 with a final report.

Appendix A Interview Template



Identifying Value from Waste Innovation - Connector Initiative

Interviewee _____ **Date** _____

Can you please identify your current waste streams and the top 3-5 waste management challenges facing your company and/or your industry?

Can you provide a sense of the scale of these challenges, i.e., estimated volumes of each waste stream and whether the challenge is local, province-wide, or within the entire Atlantic region?

Do you believe that there is value to be derived from these waste streams?

What are the current disposal costs for each waste stream?

How is the waste management challenge being addressed now?

How much is the current approach to these waste management challenges costing your company now?

How much is it costing industry more generally?

Do you have any suggestions for addressing these waste management challenges?

Are you aware of past R&D activities, or other initiatives, to address the challenge? If so, let's discuss?

What are the implications for carbon reduction if this challenge were addressed?

Are you interested in engaging in future R&D activities if the opportunity arose?

Appendix B Interview Request

**Identifying Value from Waste Innovation - Connector Initiative**

Springboard Atlantic and econext are working together to stimulate innovation in Atlantic Canada related to creating value from waste in the fisheries, aquaculture, agriculture, and forestry industries. The objective of this initiative is to identify challenges that these industries are encountering with respect to waste management that can be targeted for coordinated research, development, and innovation activities.

Pat Curran + Associates Inc., in collaboration with EnTec Environmental, has been engaged by Springboard Atlantic and econext to conduct an Atlantic-wide consultation with key industry stakeholders, leading to the development of a series of 'challenge statements' to guide potential R&D activities. You have been identified as a key informant for this consultation and at this time, we wish to arrange an opportunity to speak with you some time in the coming 1-2 weeks. In particular, we are seeking your input on the following:

- Can you please identify your current waste streams and the top 3-5 waste management challenges facing your company and/or your industry?
- Can you provide a sense of the scale of these challenges, i.e., estimated volumes of each waste stream and whether the challenge is local, province-wide, or within the entire Atlantic region?
- Do you believe that there is value to be derived from these waste streams? What are the current disposal costs for each waste stream?
- How is the waste management challenge being addressed now?
- How much is the current approach to these waste management challenges costing your company now? How much is it costing industry more generally?
- Do you have any suggestions for addressing these waste management challenges?
- Are you aware of past R&D activities, or other initiatives, to address the challenge? If so, let us discuss?
- What are the implications for carbon reduction if this challenge were addressed?
- Are you interested in engaging in future R&D activities if the opportunity arose?

We are keen to line up an interview with you and anticipate requiring between 30-45 minutes of your time. All responses will be held in confidence and reporting will only be provided in aggregate form with no attribution, unless otherwise agreed. To arrange a suitable time to chat, please contact Pat Curran, Lead Consultant at pat@patcurran.ca or 709-687-8774.

Appendix C Interviews

Name	Company	Sector	Province
Industry			
Carey Bonnell	Ocean Choice International	Fishery	NL
Frank Anderson	Riverside Lobster	Fishery	NS
Tony Doyle	Fish Harvester	Fishery	NL
Glen Winslow	Fish Harvester	Fishery	NL
Dwan Street	Fisheries, Food and Allied Workers	Fishery	NL
Ben Wiper	3F	Fisheries	NL/NS
Brent Chaffey	New World Dairy	Agriculture	NL
Doug Thompson	PEI/NS Dairy Farmers	Agriculture	PEI/NS
John Russell	NB Farmers Association	Agriculture	NB
Ken Reicker	Reicker's Farms	Agriculture	NB
Carolyn Marshall	NS Federation of Agriculture	Agriculture	NS
Rod Badcock	BioApplied Innovation	Forestry	NS/NB
Alan Eddy	Port Hawksbury Paper	Forestry	NS
Bill Dawson	NL Forest Industry Association	Forestry	NL
Betty House	Atlantic Fish Farmers	Aquaculture	NL/NB/NS
Darrell Greene	Newfoundland Aquaculture IA	Aquaculture	NL
Jason Card	MOWI	Aquaculture	NL/NB
Eric Walker	Lonsview Farms	Agriculture	NB
Derek Butler	Association of Seafood Producers	Fishery	NL
Bill Gregory	Harricot Farms	Agriculture	NL
Diane Hollett	NL Marine Organics	Fishery	NL
Emily Bland	SucSeed	Compost	NL
Other			
Adam Dick	NRCan	Forestry	NB/NS
Keith Hutchings	CCFI	Fisheries & Aquaculture	NL/AC
Meaghan Seagrave	BioNB	General	NB
Yves Gagnon	Strategix	General	NB
Lynn Adams	ACOA	General	NS
Rob Mallay	ACOA	General	NL
Lori Kennedy	ACOA	Fisheries	NL
Scott Dawe	ACOA	Forestry	NL
Bonnie O'Rourke	ACOA	Forestry	NL
Michel Poitras	ACOA	Forestry	NB
Gail Edwards	ACOA	Fisheries	NS
Larry Coles	ACOA	Fisheries	NS
Ken Carter	Grenfell Campus	General	NL
Kirk Youden	DIET	General	NL
Wayne Roebathan	DIET	General	NL
Brad Power	MNL	General	NL
Maureen Foley	NL Federation of Agriculture	Agriculture	NL
Decline/No Response			

Name	Company	Sector	Province
Wayne Simmons	NL Federation of Agriculture	Agriculture	NL
Donald Killorn	PEI Federation of Agriculture	Agriculture	PEI
Greg Donald	PEI Potato Growers	Agriculture	PEI
Jim Cardwell	Cardwell Compost	Agriculture	NB
Unknown	Woodlot	Compost	NB
Eric Moreau	Potato Farmer	Agriculture	NB
Kelly Baggs	Egg Producers of NL	Agriculture	NL
John Moores	Dairy farmers of NL	Agriculture	NL