Adapting to a warming climate:

Subarctic Gardening in Remote Indigenous Communities

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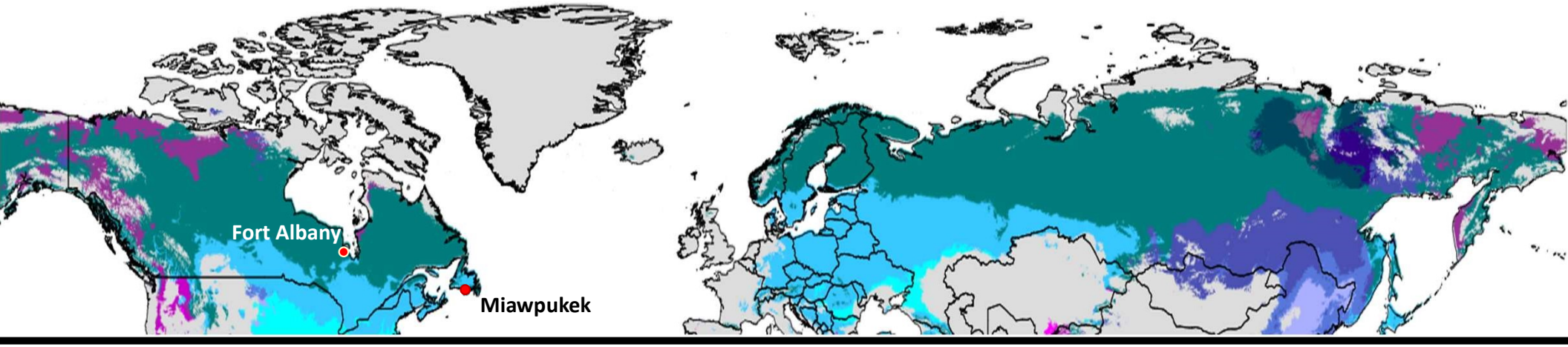
Köppen-Geiger Climate Map

Beck et al. (2018)



Feature	Fort Albany First Nation, ON, CA		Miawpukek First Nation, NFLD, CA	
Territory:	Omushkego Cree		Miawpukek Mi'kmaq	
Access Status:	Isolated		Remote	
Population:	900		2000	
Food insecurity rate:	70.3%	***Est. Year 2050***	26%	***Est. Year 2050***
Annual Temperature:	-1.0 °C	+1.5°C	+4.6 °C	+ 6.3°C
Annual Precipitation:	615 mm	658 mm	1390	1477 mm
Frost-Free days:	94 days	120 days	145 days	165 days

Project Goals

Utilize techniques that are regionally suitable

Harmonizing Indigenous knowledge & land-based activities with gardening

Fort Albany First Nation's community garden

2012-2014

Subarctic shelterbelt production trials

Spiegelaar & Tsuji, 2013
Spiegelaar et al., 2013

2015-2017

Diversifying crops
Incorporate perennials
Add low-tech strategies

Barbeau et al., 2015, 2018
Wilton et al., 2017

2018-present

Diversifying crops
Add garden beds
Enhance community gathering

Tsuji et al., 2019



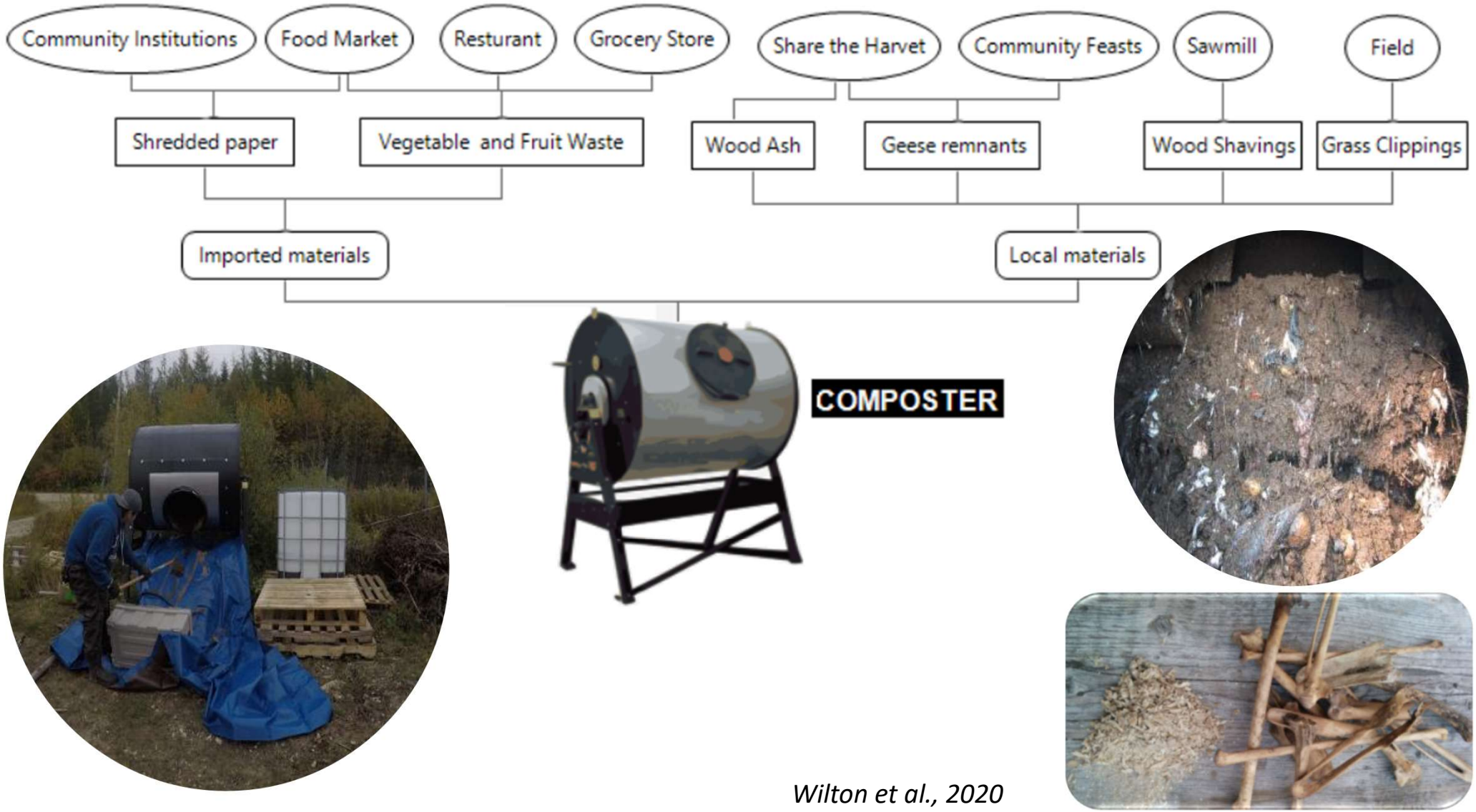









The Fort Albany garden program

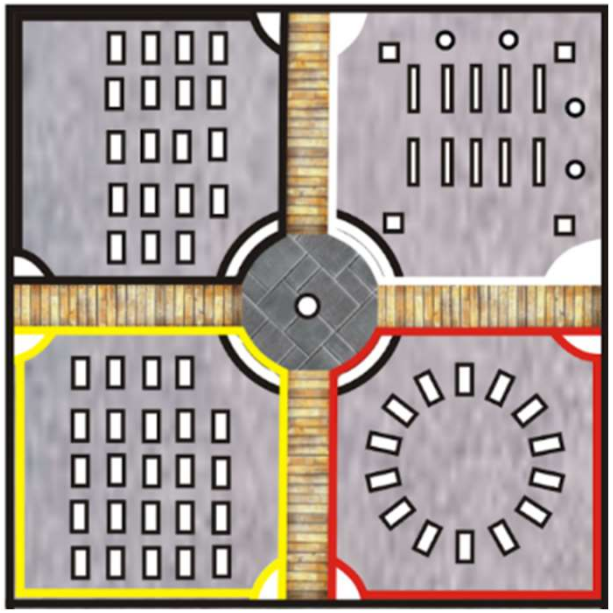



Wilton et al., 2020

Miawpukek First Nation, NL

Medicine Wheel Garden Plan

Elders' Garden



Perennial Garden

Community Garden

Classroom Garden


Oct 2019


Oct 2020

Meegwetch - Wela’lioq - Thank You

Acknowledgements

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