

February 28, 2017

Study about Climate Change Adaptation Practices of Land Trusts

Organizers:

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To Whom It May Concern,

This letter is written on behalf of Dr. Michael Drescher at the School of Planning at the University of Waterloo, located in Waterloo, Ontario, Canada in regards to conducting a study on land trusts in Ontario. The importance of land trusts is understood: they protect vital natural lands which would be in danger of degradation or loss otherwise. Therefore, it is essential that the conservation practices implemented by land trusts are successful. The purpose of the current research study is to take one factor, climate change, and examine how land trusts are adapting their current conservation practices to this factor. Land trusts in Ontario and other Canadian provinces are being contacted to voluntarily contribute information about their climate change adaptation efforts. Currently, there is a lack of information about climate change adaptation and protected land conservation, thus this research is essential for furthering knowledge about these subjects. By investigating operations and strategies of land trusts, the research team hopes to understand the different types of conservation methods utilized and their relation to climate change adaptation. The end goal is to determine the current level of climate change adaptation of Canadian land trusts to help improve practices for protecting land holdings for future generations.

The questionnaire examines land trusts as a whole, ranging from administrative information to specifics about acre amount. However, the main focus is understanding climate change awareness, perception, and adaptation of each land trust. We encourage land trust representatives to complete this questionnaire in groups, not individually, with a time commitment of about one hour.

Participation in this study is completely voluntary. Confidentiality is guaranteed and all collected data will be de-identified. The questionnaire is available through an editable Portable Document Format (PDF), a hard copy which can be printed and returned to the researchers via email or mail, or an online survey. The online survey is available here: <http://www.surveygizmo.com/s3/3008409/Land-Trust-Questionnaire>. Please be mindful of your internet security whilst filling out the online survey. When information is transmitted over the internet, privacy cannot be guaranteed. There is always a risk your responses may be intercepted by a third party (e.g., government agencies, hackers). University of Waterloo researchers will not collect or use internet protocol (IP) addresses or other information which could link your participation to your computer or electronic device without first informing you.

According to University of Waterloo policy, the data gathered will be retained at the School of Planning in a secure location for ten years, after which the data will be destroyed. There are no known or anticipated risks to participation in this questionnaire. In order to indicate your consent in this survey, please sign and return the form on the next page. However, participants have the right to withdraw consent to participate at any time without fear of reprisal and may decline answering any questions they prefer not to answer. If there are questions, desire for more information, or inquiries about hard copies, please do not hesitate to contact Dr. Michael Drescher through email at mdresche@uwaterloo.ca or by telephone at 1 - (519) 888 – 4567, extension 38795. Please return the completed questionnaire to Dr. Michael Drescher by email to mdresche@uwaterloo.ca or by mail to Dr. Michael Drescher, School of Planning, Faculty of Environment, University of Waterloo, 200 University Ave West, Waterloo, Ontario, N2L 3G1, Canada by **April 28 2017**.

This research project has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 21760). However, the final decision to participate is yours. If there are any concerns or questions for the committee, please contact the Chief Ethics Officer at the Office of Research Ethics at 1 - (519) – 888 – 4567 extension 36005 or ore-ceo@uwaterloo.ca. For all other questions, please contact Michael Drescher through email at mdresche@uwaterloo.ca or by telephone at 1- (519) 888 – 4567.

Thank you in advance for your interest in this study!

Yours sincerely,

Dr. Michael Drescher
Nadya Mrochkovskaia

ORE #21760

Land Trust Questionnaire

Consent of Participating Land Trust

Thank you for your interest in participating in our study! Before you continue with the questionnaire, please sign this form of consent as a representative of your land trust. By signing this consent form, you are not waiving your legal rights or releasing the investigators or the University of Waterloo from their legal and professional responsibilities.

I have read the information presented in the information letter about a Land Trust study being conducted by Dr. Michael Drescher at the School of Planning at the University of Waterloo. I have had the opportunity to ask any questions I have related to this study, to receive satisfactory answers to my questions, and any other additional details I wanted. I am aware that I may withdraw from the study without penalty at any time by advising Dr. Michael Drescher of this decision at mdresche@uwaterloo.ca or 1 - (519) – 888 – 4567 extension 38795.

This project has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee (ORE# 21760). I was informed that if I have any comments or concerns resulting from my participation in this study, I may contact the Chief Ethics Officer, Office of Research Ethics, at 1-519-888-4567 ext. 36005 or ore-ceo@uwaterloo.ca.

With full knowledge of all foregoing, I agree, of my own free will, on behalf of my land trust, to participate in this study.

Print Name of Representative of Land Trust

Signature of Representative of Land Trust

Name of Land Trust

Date

Witness

Land Trust Questionnaire

This study aims to expand knowledge of land trusts' perceptions of and adaptation abilities to climate change. We hope that the outcomes of this study will highlight facilitators and challenges as well as best practices for climate change adaptation. The outcomes of this study will be shared with the land trust community through a variety of channels with the hope that Canadian land trusts can benefit from our work.

When responding to the following questionnaire, please make sure you select answers representative of the entire land trust. If possible, it is encouraged that multiple staff members complete this document together in order to ensure the most accurate responses. Furthermore, you are not required to answer any undesired questions. Your anonymity and confidentiality is guaranteed. If you have any questions or concerns about this questionnaire, including inquiries about hard copies, please do not hesitate to contact Michael Drescher at mdresche@uwaterloo.ca or at (519) 888 – 4567 extension 38795. Thank you in advance!

1) Please state the name of the land trust: _____

2) What is the mission statement or goal of the land trust? Please summarize in one sentence.

3) In what year was the land trust founded? _____

4) Please state the amount of hectares the land trust protects. This could be through conservation easements, ownership, leases of land, management agreements, etc. _____

5) Please describe the specific geographic areas where the land trust protects sites (eg. City of Toronto, parts of Lake Nippising, Haldimand County, Kenora District).

6) How many members does the land trust have? _____

7) Please indicate the amount of individuals who work for the land trust:

Full time employees: _____ Volunteers: _____
 Part time employees: _____ Others: _____

8) Please indicate the reason(s) for land protection of sites. Select all that apply.

- Preserving biodiversity
- Preserving ecosystem services
- Protecting from encroaching development
- Preserving water bodies and/or shorelines
- Protecting water supplies
- Other (please elaborate): _____
- Maintaining agricultural lands
- Preserving cultural heritage locations
- Habitat protection
- Restoration of natural areas
- Maintaining recreation areas

9) Please state the percentage of hectares for which the land trust performs the following stewardship activities:

	0%	1 - 25%	26 - 50%	51 - 75%	76 - 99%	100%	Unknown
Annual site visits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walk boundaries for encroachments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remove trash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Remove invasive species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restore natural communities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitor water quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Perform activities that improve habitats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitor biological indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10) What are the top three indicators for the land trust that prove successful conservation of land holdings? (e.g. smaller population of invasive species, cleaner water, etc.)

1: _____

2: _____

3: _____

11) Does the land trust have a Board of Directors?

Yes: please proceed to question 11a)

No: please proceed to question 12

a) How many individuals are on the Board of Directors? _____

12) Please state the 2015 annual budget of the land trust to the best of your knowledge: _____

a) Has there been a change to the budget in the past few years?

Yes: it has increased

Yes: it has decreased

No: it has remained the same

Other (please elaborate): _____

b) How much of the 2015 budget has accounted for capital expenses and operations of the land trust?

Capital expenses: _____%

Operations: _____%

13) Has the land trust ever been asked to evaluate whether the lands it protects are meeting the conservation goal(s) indicated for the sites?

Yes, regularly: please proceed to question 13 a)

Yes, rarely: please proceed to question 13 a)

Yes, sometimes: please proceed to question 13 a)

No, never: please proceed to question 14

a) Which organization(s) or group(s) requested this evaluation (e.g., member, donor, government agency):

14) Please state the percentage of hectares for which the land trust conducts the following:

	0%	1 - 25%	26 - 50%	51 - 75%	76 - 99%	100%	Unknown
Prepare a baseline documentation report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prepare an ecological inventory and description	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop specific conservation goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop a list of conservation targets for sites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop land management plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identify threats to conservation goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conduct annual photo documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15) How well informed is the land trust about the effects of a changing climate on its land holdings?

- Not at all
 Slightly
 Moderately
 Very well

16) Does the land trust believe its land holdings are being affected by climate change?

- Yes: please proceed to question 16 a)
 No: please proceed to question 16 b)
 Don't know: please proceed to question 18

a) How confident is the land trust that climate change affects its properties?

- Extremely
 Very
 Somewhat
 Not at all

b) How confident is the land trust that climate change does NOT affect its properties?

- Extremely
 Very
 Somewhat
 Not at all

17) From which resources did you obtain the information needed to answer question 16 (e.g. government reports, other land trusts, conferences, own observations)? If more room is required to answer, please use the last page of the questionnaire.

18) Do donors and other members of the land trust believe land holdings are being affected by climate change?

- Yes, all do Yes, some do No, none do Unknown

19) Which of the following best describes the land trust's current phase of climate change adaptation planning and implementation?

- Understanding Planning Implementing
- Other (please elaborate): _____

20) How concerned are donors and other members of the land trust about adapting to climate change?

- Extremely concerned Very concerned Somewhat concerned Not concerned Unknown

21) What is the land trust's level of concern about these potential stressors on your land holdings during the next 10 years?

	Extremely concerned	Very concerned	Somewhat concerned	Not concerned	Not applicable
Natural disasters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local effects of climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Population growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Residential development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infrastructure development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weak economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limited capacity of local government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate):					
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please elaborate):					
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22) How does the land trust believe climate change has affected or will affect the local conditions and features of the natural environment protected in its land holdings? Even if you have not considered the potential effects of climate change within the areas, please offer the best estimate.

	Increase	Stay the same	Decrease	Not applicable
Summer air temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Winter air temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive species (land)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive species (aquatic)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of snow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Length of winter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frequency of irregular seasonal change (e.g. warm one day and frost the next)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of rain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of river/lake water in the summer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of river/lake water in the winter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flooding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm frequency or intensity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faunal biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floral biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diversity of ecosystems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of pests and diseases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildfire frequency or intensity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of air pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of soil pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of water pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abundance of ecosystem services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate):				
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please elaborate):				
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23) Please review these same items as in question 22 and indicate the amount of information the land trust has on each item in relation to its land holdings and climate change.

	All needed information	Most of the needed information	Some of the needed information	None of the needed information	Not applicable
Summer air temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Winter air temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive species (land)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invasive species (aquatic)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of snow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Length of winter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frequency of irregular seasonal change (e.g. warm one day and frost the next)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of rain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of river/lake water in the summer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of river/lake water in the winter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Flooding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Storm frequency or intensity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Faunal biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floral biodiversity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diversity of ecosystems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of pests and diseases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildfire frequency or intensity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of air pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of soil pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of water pollution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abundance of ecosystem services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate):					
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please elaborate):					
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24) How does the land trust believe climate change has affected or will affect flora and fauna in its land holdings? Even if you have not considered the potential effects of climate change within the areas, please offer the best estimate.

	Will gain some species	Will gain some species and lose some species	Will lose some species	Will neither gain nor lose species	Not applicable
Land fauna	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic fauna	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land flora	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic flora	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25) Please review these same items as in question 24 and indicate the amount of information the land trust has on each item in relation to its land holdings and climate change.

	All needed information	Most of the needed information	Some of the needed information	None of the needed information	Not applicable
Land fauna	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic fauna	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land flora	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aquatic flora	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

26) Of the mentioned items in questions 22 to 25, which is the most concerning for the land trust? Please list below from highest to lowest concern.

- 1: _____
- 2: _____
- 3: _____
- 4: _____
- 5: _____

27) How knowledgeable is the land trust when it comes to deciding which adaptation practices are appropriate or suitable for adapting to climate change?

- Not knowledgeable Somewhat knowledgeable Very knowledgeable Extremely knowledgeable

a) Through which practices did the land trust obtain the knowledge about adapting to climate change? Please elaborate (e.g. conferences, workshops, community engagement). If more space is needed, please utilize the last page of the questionnaire.

28) Has the land trust implemented any climate change adaptation measures?

- Yes: please proceed to question 28 a) No: please proceed to question 29 Unsure: please proceed to question 29

a) Which climate change adaptation strategies has the land trust implemented? Please explain (e.g. risk assessment of areas, mitigation efforts against flooding). If more space is needed, please utilize the last page of the questionnaire.

29) The land trust may have encountered obstacles when planning or implementing adaptation efforts. Please select which ones are present within the land trust.

	Present	Not present	Unknown
Lack of urgency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of agreement over importance of climate change adaptation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insufficient amount of staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of trust in science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of public support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insufficient funding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of capacity within the land trust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adaptation is inconsistent with land trust mandate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of agreement in selecting solution options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unsure that climate change presents a problem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of leadership	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other issues more concerning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of data/information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of information analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opposition from other land trusts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opposition from donors or other members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate):			
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please elaborate):			
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30) What does the land trust consider to be the major obstacles or constraints to further expand upon climate change adaptation? Please list the top three from question 29 in order of importance (e.g. local knowledge, financing, etc).

- 1: _____
- 2: _____
- 3: _____

31) There are a number of costs with respect to implementing and developing climate change adaptation practices for land trusts. Please indicate the degree to which the following cost items limit your progress in climate change adaptation.

	Not at all limiting	Not very limiting	Somewhat limiting	Very limiting	Don't know/Not applicable
Time to make adaptation a priority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Equipment/technology cost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training expenses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of public engagement for strategic planning related to climate change adaptation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unable to hire more staff to balance priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of increased investment in adaptation strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cost of assessment to evaluate price of adaptation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32) What does the land trust consider to be strengths to further expand upon climate change adaptation? Please list the top three in order of importance (e.g. local knowledge, financing).

- 1: _____
- 2: _____
- 3: _____

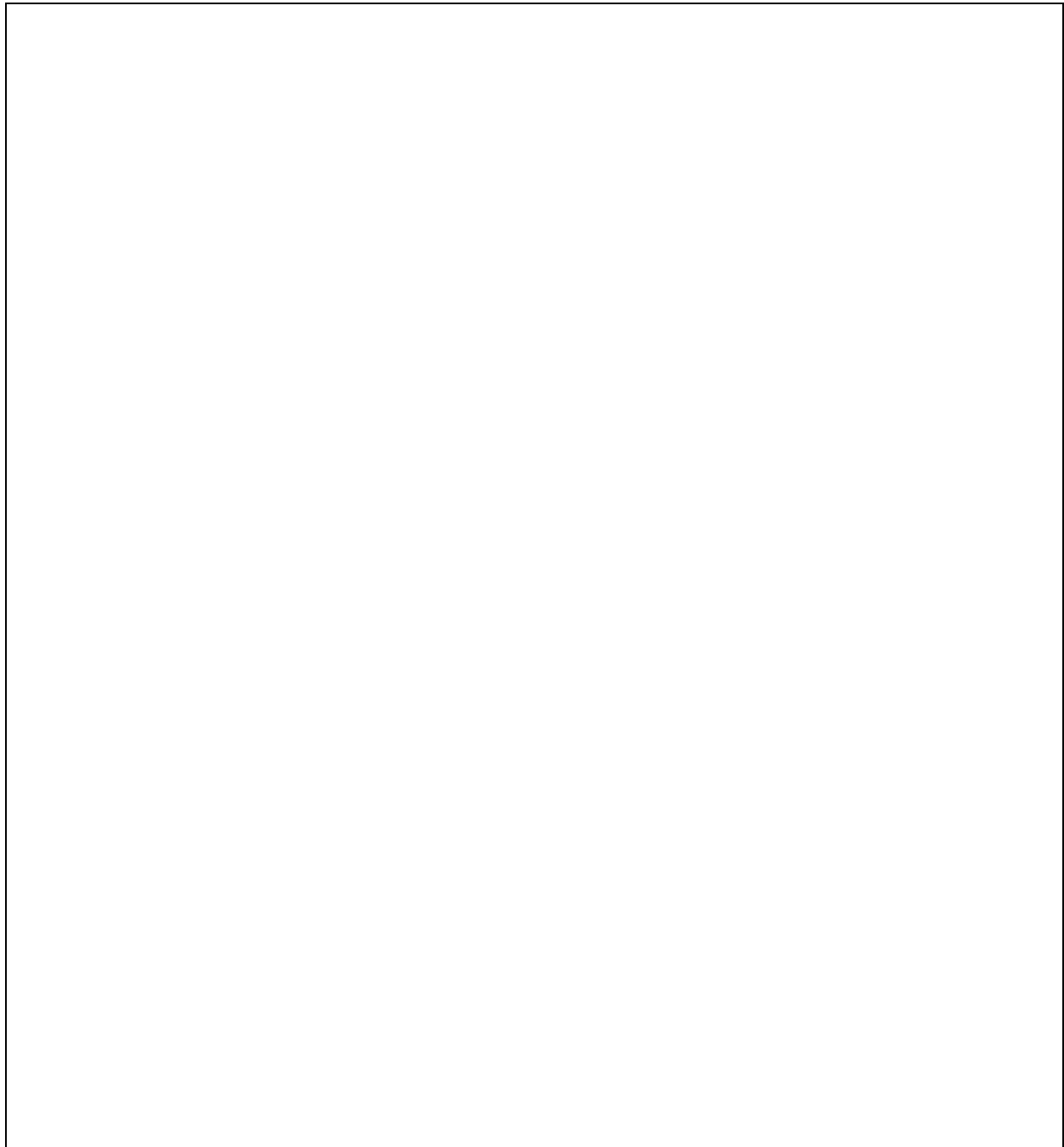
33) With respect to improved climate change adaptation, please indicate how much the land trust agrees that the items below would support its practice.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Increased flexibility for decision makers of the land trust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increased flexibility to select methods of conservation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Better regional climate change information (e.g. vulnerability assessments, downscaled information)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More educational materials in general (e.g. adaptation options related to flooding, invasive species)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community of practice for distribution of new information or research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More training (in classrooms/in the field)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Practical guidance and examples	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Support for conferences and forums for professional discussion and engagement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional vulnerability assessments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Opportunities to work across institutional borders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information on how to propose innovative practices to land trust decision makers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please elaborate): _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34) Please indicate below whether your land trust would be willing to participate in a follow-up interview.

Yes No

Please write any additional comments below. If you are using this space to provide more information for one of the previous questions, please write the question number beside your answer. Feel free to attach another piece of paper if necessary.



Thank you for your participation! Please return this questionnaire via email to mdresche@uwaterloo.ca or send by mail to
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