

# MA Forest Conservation Practitioners: Follow up Surveys - Summary of Results

Information sources and tools for forest conservation  
(protection and stewardship)

Scott Jackson, Melissa Ocana, Ezra Markowitz, Lee Halasz & Andrea Mah  
UMass Amherst Extension, and Department of Environmental Conservation

## *What is this document?*

We conducted two follow up surveys to assess how the use of these land conservation resources may have changed since the original survey. An overview of Surveys 2 and 3 and their findings, including comparison to the initial survey data, is presented here. For summaries of other components of the research project, please visit the [Research page](#) of the [Land Conservation Tools](#) website.

# Project overview

UMass Amherst Extension received a four-year grant to **study the resources used by Massachusetts organizations to assist with forest conservation decision making.**

The research project focused on the information sources and tools (resources) developed to support decision making for forest protection (permanent land conservation), forest stewardship (land management) and climate adaptation in Massachusetts. **The study aimed to understand how these resources are used (or not used) by conservation practitioners and how outreach efforts may change their use over time.**

The initial phase of the project involved conducting a web-based survey of relevant practitioners. We then conducted focus groups with some survey participants to more deeply explore issues raised in the survey. **Based on these findings, we designed and launched a website about the resources.**

Sixteen months after the first survey, we conducted a second survey to explore changes in resource use. We then developed and released two summary outreach products, and conducted a third survey, 22 months after the first survey. **The findings of the follow-up surveys are presented here.**

# Executive summary

We conducted two surveys, 16 and 22 months after the original survey of Massachusetts based land conservation practitioners, to explore any changes in their interactions with the resources. **We observed a marginally significant increase in the average number of resources that participants used, and recorded an increased importance attributed to some individual resources. There was a strong motivation to use these resources, but low proficiency.** An interesting takeaway was that the most experienced participants in each survey were more likely to complete the next follow up survey.

We were also interested in the impact of and reaction to a new website and two outreach products that were intended to improve understanding of the resources. Unfortunately, few participants were aware of or had used the website, and fewer were aware of or had used the two outreach products. However, these materials had only been released shortly before the surveys were administered, and happily, participants were interested in using these outreach resources to inform their work.

**Our research found evidence for increased use and perceived importance of the resources, and high motivation to use them. Improved and sustained outreach efforts are likely needed to realize the more widespread use of these resources, to help improve land conservation outcomes.**

## Survey 2: Context and methods

Sixteen months after the first survey, we sent the second survey to those Survey 1 participants who indicated an interest in participating in further research (140 of 227 participants), to explore any change in the measures related to resource use.

As in the first survey, participants completed questions associated with their resource awareness, use, proficiency and importance, and we included new questions about resource understanding and the level of motivation to use them.

Participants were also asked about their awareness and use of the [Land Conservation Tools](#) website, which had been released a few weeks earlier. The website was developed to compile, explain, differentiate and provide ready access to the resources.

# Survey 2: Participants

64 of the 140 participants who were sent Survey 2 completed it, representing a 46% response rate.

The organization affiliation of participants were:

- Municipalities (44%)
- Land trusts (31%)
- Private consultants (largely licenced foresters) (17%)
- State government agencies (6%)
- Regional planning authorities (2%)

# Survey 2: Target resources

The survey focused on nine resources:

- **Adaptation Workbook** (Northern Institute of Applied Climate Science/U.S. Forest Service)
- **BioMap2** (MassWildlife & The Nature Conservancy)
- **DSL - Designing Sustainable Landscapes** (UMass Extension)
- **MAPPR - Mapping & Prioritizing Parcels for Resilience** (Mass Audubon)
- **Massachusetts Climate Action Tool** (UMass Extension, MassWildlife, Northeast Climate Adaptation Science Center)
- **MassCAPS - Massachusetts Conservation Assessment & Prioritization System** (UMass Amherst)
- **Nature's Network** (UMass Amherst & U.S. Fish & Wildlife Service)
- **New England Landscape Futures (NELF) Explorer** (Harvard Forest)
- **Resilient & Connected Landscapes** (The Nature Conservancy)

# Survey 2: Resource measures

**Awareness:** Participants were asked whether they were aware of each resource.

**Use:** For each resource they were aware of, participants were asked whether they had used the resource.

**Proficiency:** Participants rated how proficient they felt using each resource that they had used (*1 = novice, 5 = expert*).

**Importance:** Participants rated how important each resource that they had used is for their decision-making (*1 = not at all important, 5 = extremely important*).

**Understanding:** Participants rated how well they understood the conceptual basis and purpose of each resource that they had used (*1 = not at all, 5 = completely*).

**Motivation:** Participants rated how likely they were to use each resource that they were aware of, in the future. (*1 = not at all likely, 5 = extremely likely*).

# Survey 2: Website measures

Participants were asked:

- Whether they were aware of the [Land Conservation Tools](#) website
- How they became aware of the website
- Whether they had used the website
- How often they used the website
- Any barriers that prevented them from using the website
- If they planned to use the website in the future

## Survey 2: Resource results

- **BioMap2 was the highest scoring resource for most measures.**
- Motivation to use the resources in the future was rated highly (typically 3.4-3.9 out of 5).
- Understanding of the conceptual basis and purpose of the resources was rated moderately (typically 3.0-3.5 out of 5).
- Importance of the resources for decision-making was also rated moderately (typically 3.0-3.6 out of 5).
- Proficiency in using the resources was rated low (typically 2.7-3.1 out of 5).

## Surveys 1 → 2: Use and awareness

The average number of resources that participants were aware of did not change significantly between Survey 1 (4.1) and Survey 2 (4.0).

The average number of resources that participants used did not change significantly between Survey 1 (1.9) and Survey 2 (2.0).

However, participants who completed Survey 1 and Survey 2 reported significantly higher resource awareness and use than participants who only completed Survey 1. It seems that our research retained the more experienced participants.

At the individual resource level, no changes in awareness or use were significant.

# Surveys 1 → 2: Importance and proficiency

We looked for any changes in individual resource proficiency and importance.

- **MassCAPS and NELF Explorer recorded a significant increase in importance for decision making.**
- No significant change in proficiency was observed for any resource.

Note that these considerations were measured differently than were awareness and use, and it was not appropriate to pool proficiency and importance ratings to look for trends in the suite of resources.

Also note that understanding and motivation were not included in Survey 1, so no assessment of any change in those measures was possible at the end of Survey 2.

## Survey 2: Website results

The [Land Conservation Tools](#) website was published in April 2021, just a few weeks before the survey was released. It is perhaps not surprising that only a small portion of survey participants were aware of or had used the website.

- 17% of participants were aware of the website.
- 6% of participants had used the website.
- 75% of participants who answered a question anticipating their future use indicated they were either *extremely likely* or *somewhat likely* to use the website in the future.

## Survey 3: Context and methods

The third survey was essentially conducted in the same manner as the second, and was administered six months later (22 months after the first survey). It aimed to capture any further changes in resource measures, the use (and perhaps influence of) the [Land Conservation Tools](#) website which was launched a few weeks prior to Survey 2, and awareness of two newly developed outreach documents:

[\*At a Glance: Massachusetts Land Conservation Tools\*](#), released in October 2021 (three months prior to the survey), is an infographics 'cheat sheet' that provides a brief overview and comparison of the nine resources, towards understanding their usefulness.

[\*Massachusetts Land Conservation Tools: Exploring Climate Adaptation\*](#), released in December 2021 (a few weeks before the survey), aims to assist practitioners to better understand how the nine resources can be used to inform climate adaptation action.

# Survey 3: Participants

39 of the 140 participants who were sent Survey 3 completed it, representing a 26% response rate.

The organization affiliation of participants were very similar to those reported in Survey 2:

- Municipalities (44%)
- Land trusts (31%)
- Private consultants (largely licensed foresters) (15%)
- State government agencies (8%)
- Regional planning authorities (3%)

# Survey 3: Resource results

- **BioMap2 was again the highest scoring resource for most measures.**
- Motivation to use the resources in the future was rated highly (typically 3.0-3.7 out of 5).
- Understanding of the conceptual basis and purpose of the resources was rated moderately (typically 3.0-3.5 out of 5).
- Importance of the resources for decision-making was rated moderately (typically 2.7-3.6 out of 5).
- Proficiency in using the resources was rated low (typically 2.4-3.4 out of 5).

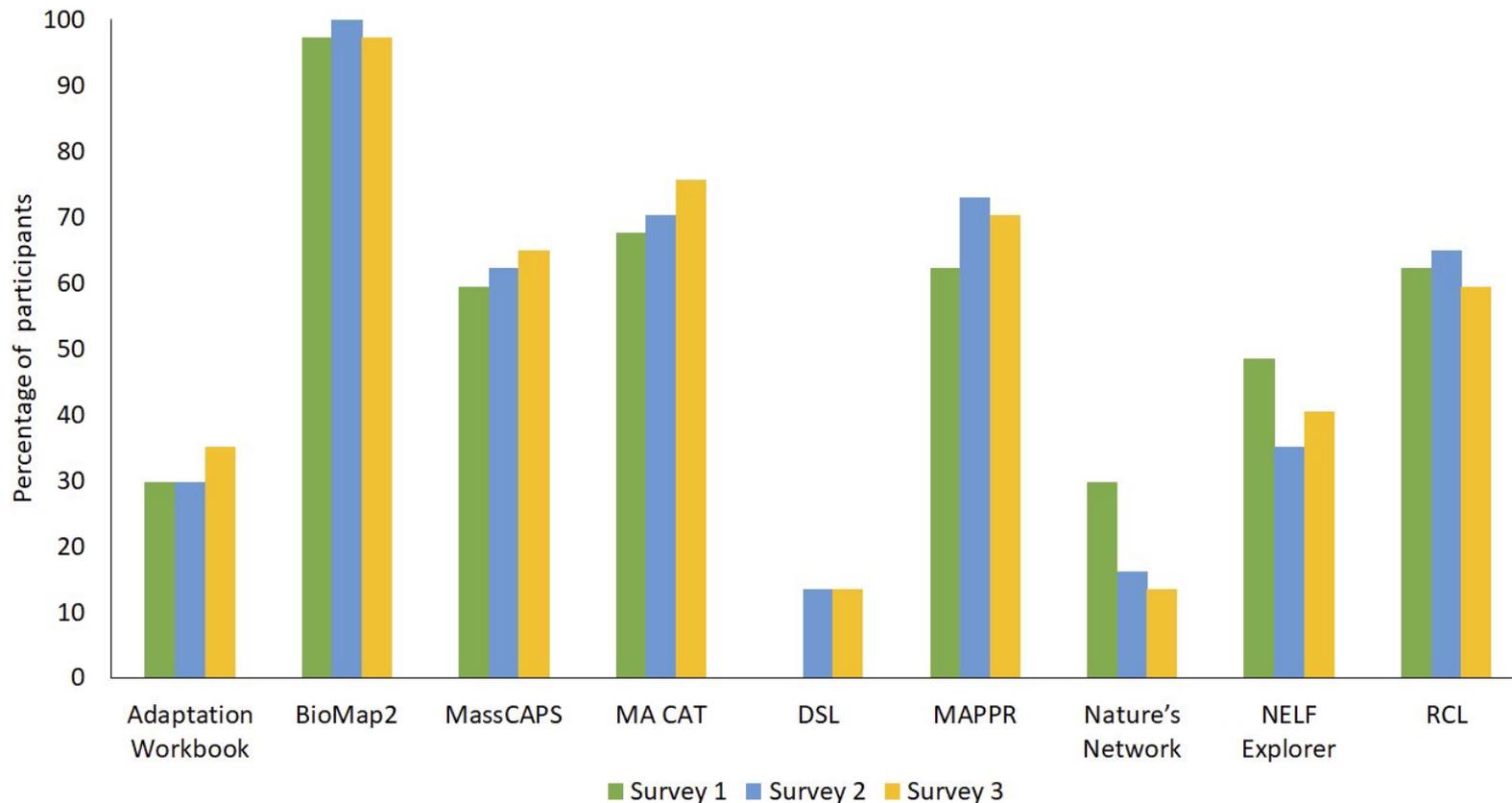
# Survey 1 or 2 → 3: Awareness and use

We explored any changes in awareness and use between Survey 1, Survey 2 (16 month follow-up) and Survey 3 (22 month follow-up):

- **The number of resources that people used showed a marginally significant increase** from Survey 1 (2.2) → Survey 3 (2.5), but there was no significant change from Survey 2 (2.4) → Survey 3 (2.5). There were no significant changes in awareness between Survey 1 (4.6) → Survey 3 (4.6) or between Survey 2 (4.5) → Survey 3 (4.6).
- The following bar charts show the changes in awareness and use of individual resources. No statistically significant changes were recorded.
- Again, participants who completed Survey 3 reported significantly higher resource awareness and use than participants who only completed Survey 1 or Survey 1 & 2. It seems that our research retained the more experienced participants.

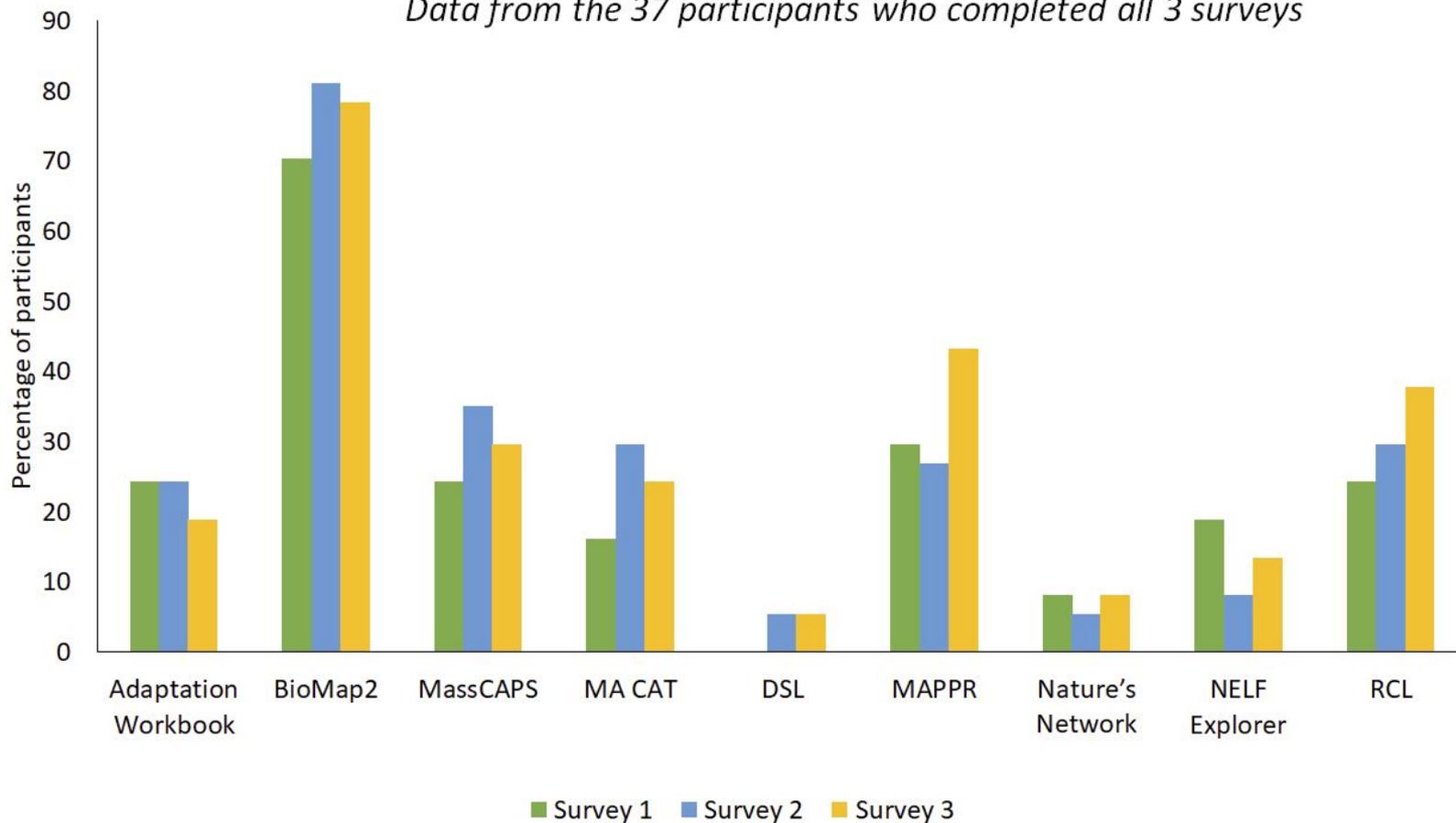
# Resource Awareness

*Data from the 37 participants who completed all 3 surveys*



# Resource Use

*Data from the 37 participants who completed all 3 surveys*



# Survey 1 or 2 → 3: Motivation, understanding, importance and proficiency

We examined how motivation, understanding, importance and proficiency changed between Survey 1, Survey 2 (16 month follow-up) and Survey 3 (22 month follow-up). Sample sizes of these comparisons were limited, only relating to participants who had used a resource at two timepoints.

**There was a significant increase in the perceived importance of MAPPR for decision-making** from Survey 1 to Survey 3.

There were no significant trends for:

- Changes in Motivation from Survey 2 to Survey 3
- Changes in Understanding from Survey 2 to Survey 3
- Changes in Importance from Survey 2 to Survey 3
- Changes in Proficiency from Survey 1 or Survey 2 to Survey 3

# Survey 3: Website results

**Between Surveys 2 and 3, there was a descriptive increase in awareness, use, and intended future use of the [Land Conservation Tools](#) website:**

- 38% of participants were aware of the website (17% in Survey 2).
- 15% of participants had used the website (6% in Survey 2).
- 81% of participants who answered a question anticipating their future use indicated they were either *extremely likely* or *somewhat likely* to use the website in the future (75% in Survey 2).

# Survey 3: Summary outreach documents

The 40 participants who completed Survey 3 were asked about the two summary outreach documents.

## *At a Glance: Massachusetts Land Conservation Tools*

- 7 participants were aware of or recognized this document
- 3 participants had used it
- 19 participants said they were likely to use it in the future

## *Massachusetts Land Conservation Tools: Exploring Climate Adaptation*

- 8 participants were aware of or recognized this document
- 2 participants had used it
- 18 participants said they were likely to use it in the future

# Conclusion

**We observed a marginally significant increase in the average number of resources that participants used.** An interesting takeaway was that the most experienced participants in each survey were more likely to complete the next follow up survey, i.e. participants who completed Surveys 1 and 2 were more likely to complete Surveys 2 and 3, respectively, perhaps providing less room for recording change in resource awareness and use.

**Significant increases in the perceived importance of the resources for decision-making were observed for MassCAPS, MAPPR and NELF Explorer,** but no significant changes were observed in individual resource proficiency or understanding, or the motivation to use individual resources in the future. **However, participants generally reported high motivation to use these resources, but low proficiency.**

Few participants were aware of or had used the outreach materials, but those who had used them found them helpful, and it seems that **Massachusetts-based land conservation decision-makers are interested in adopting these science-based resources.**

**Sustained outreach efforts are needed to seize upon practitioner interest and increase the appropriate and confident use of these valuable and important land conservation resources.**

Thanks for your interest!