

# GTMNERR Data Dashboard Needs Assessment: Survey Results

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DRAFT v1

**Project: Using collaborative open science tools to improve engagement with the ecology of the Guana River Estuary**

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The University of Florida and Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR) are partnering with the local community and broader science community to develop a web-based, public-facing, interactive dashboard to provide access to Guana River Estuary (GRE) datasets. The aim of this work is to support open science and to increase diverse engagement with GRE within the GTMNERR by making the data available interactively, using visualization tools.

To this end, the project team sought feedback from those who have been involved with the GTMNERR to help them to better understand their needs. This document summarizes the results of an online survey that was made available via email, social media, and QR code.

## 1. Response rate

We received responses from 51 individuals. Out of these, 14 surveys were unfinished. For the purposes of this report, we also took the unfinished surveys into account.

47 respondents filled in the survey based on a link received via email, 3 via social media, 0 via the QR code available at the GTMNERR Welcome Center, and 1 via the QR code available at the kiosk at the dam.

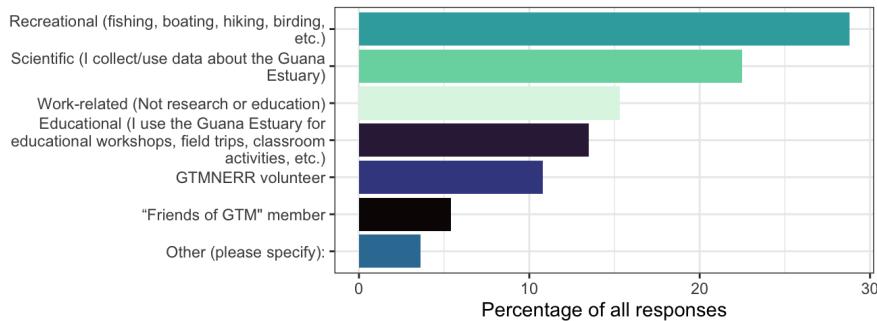
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## 2. Introductory questions

The survey started with asking respondents about their connection to the GTMNERR, how often they engage with the GTMNERR, what data they would be interested in, and whether or not they ever accessed data associated with the GTMNERR.

### 2.1 GTMNERR connection

How are you connected to the GTM?



*NOTE: Respondents could pick more than 1 response*

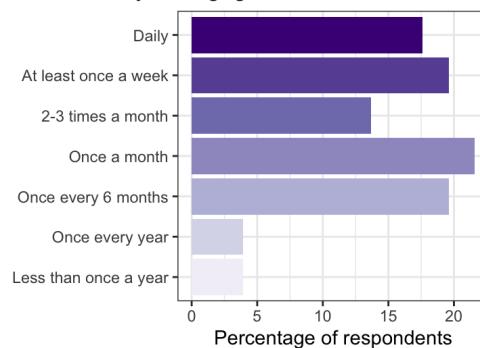
Under "Other", respondents answered:

- Lake management - FWC
- Health
- GTM-NERR MAG member
- Sometimes bring international visitors for professional conversations (am retired now).

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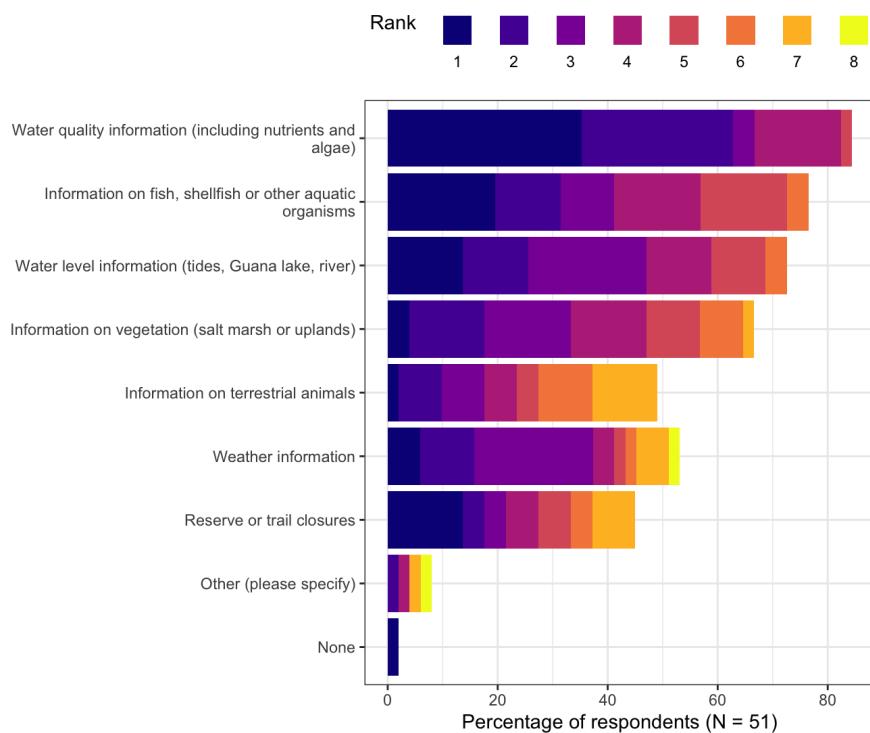
### 2.2 Level of engagement

### How often do you engage with the GTM?



### 2.3 Data of interest (in general)

What datasets are you interested in?

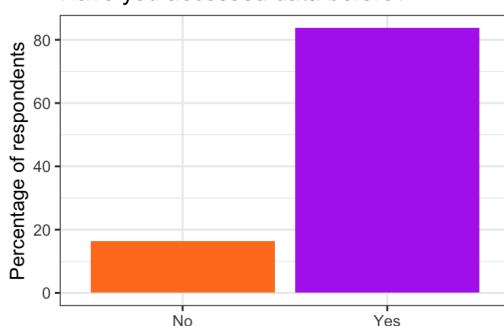


Under "Other", the three types of datasets mentioned were: historical maps, water fowl, dam operations, natural resource management practices/techniques/results.

### 2.4 Previous experience with accessing data associated with GTMNERR

The survey asked respondents whether they had accessed data before, and by "data", we meant "information, especially facts or numbers, collected to be examined and considered and used to help decision-making; or information in an electronic form that can be stored and used by a computer" for instance spreadsheets, databases, graphs, and maps."

Have you accessed data before?



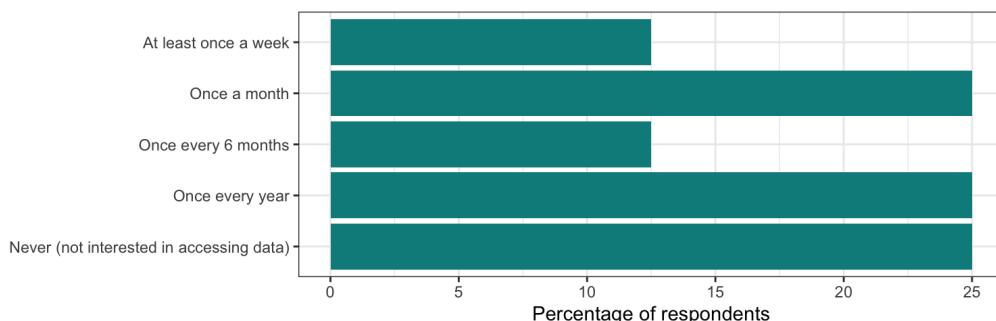
Based on their response whether or not they had accessed data, respondents answered different sets of questions. The results are summarized in the next two sections.

### 3. Feedback from respondents that had not accessed data before

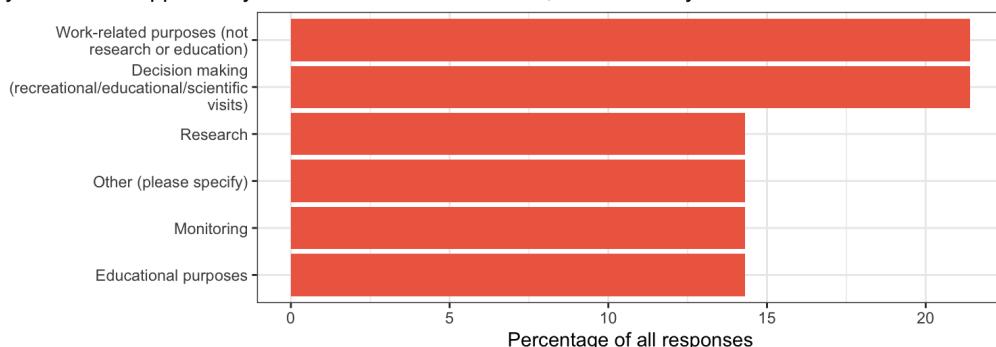
For respondents that had not (yet) accessed data ( $N = 8$ ), the survey asked broad questions on how often they would access these data, and what they would use them for.

*These responses will still be linked to the answers in 2.3*

If you had the opportunity to access data in the future, how often would you access or obtain these data?



If you had the opportunity to access data in the future, what would you use these data for?



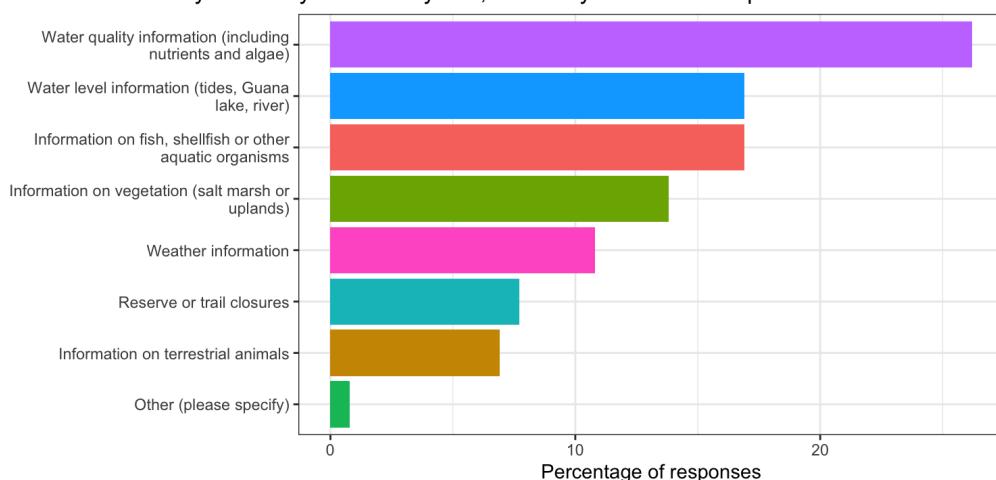
Under "Other", respondents listed:

- environmental impacts, and
- resilience planning

### 4. Feedback from respondents that have accessed data before

For respondents that have/had accessed data before, the survey asked which datasets they had accessed, and a number of detailed questions about their experiences related to how they accessed these data, the advantages and disadvantages of this access, the frequency of access, the usage of the data, and respondents' satisfaction with these data (for their needs).

What Guana Estuary data do you currently use, or have you used in the past?



The following table summarizes the detailed questions per dataset. The numbers represent percentages of respondents, or, in the case of multiple possible answers, percentages of all responses (indicated with an asterisk, \*). This table still needs some reorganizing and reordering.\*

There was an option "Other", to which there was one response: LiDAR data. *This information will be added to this table.*

q_text	Information on fish, shellfish or other aquatic organisms	Information on terrestrial animals	Information on vegetation (salt marsh or uplands)	Reserve or trail closures	Water level information (tides, Guana lake, river)	Water quality information (including nutrients and algae)	Weather information
<b>How do you most frequently obtain or access these data?</b>							
Download from website (If so, what website?)	35	57	36	56	30	26	75
Other (please specify)	10	14	21	11	30	19	25
Request from a GTMNERR staff member by email	55	29	43	22	40	55	0
Pick-up paper copy in person	0	0	0	11	0	0	0
<b>What are the advantages of this primary method of accessing or obtaining these data?*</b>							
Data is received quickly after request	21	0	12	19	16	18	10
Easy/convenient to access	29	40	42	31	41	35	43
Other (please specify)	7	0	0	12	0	2	0
Requesting the data is quick	14	20	12	12	12	18	19
The format the data are delivered / accessed in is useful	26	30	21	12	25	24	19
There are no advantages	2	10	12	12	6	4	10
<b>What are the disadvantages of the primary method of accessing or obtaining these data?*</b>							
Difficult/Complicated to access	13	10	12	10	10	8	19
Other (please specify)	17	30	18	30	19	25	25
Slow to receive	4	10	6	0	10	6	12
The format the data are delivered / accessed in is not user-friendly	13	0	18	0	14	11	6
There are no disadvantages	39	20	35	60	38	39	31
Time consuming to request	13	30	12	0	10	11	6
<b>How often do/did you access or obtain these data?</b>							
2-3 times a month	20	14	23	0	5	10	8
Daily	5	14	8	14	10	0	8
Less than once a year	15	0	15	0	20	17	0
Once a month	20	43	23	14	20	17	50
Once every 6 months	35	29	8	57	30	28	17
Once every year	5	0	23	14	0	24	8
At least once a week	0	0	0	0	15	3	8
<b>What do you typically use these data for?*</b>							
Decision making (for recreational/educational/scientific visits)	9	20	13	27	18	12	17
Educational purposes	24	27	22	27	15	15	17
Monitoring	15	20	13	9	9	17	4
Research	38	13	26	18	33	35	26
Work-related purposes (not research or education)	15	13	17	9	18	17	26
Other (please specify)	0	7	9	9	6	4	9
<b>How well do these data generally satisfy your need(s)?</b>							
Extremely well	5	14	0	14	5	3	8
Moderately well	45	43	46	29	55	41	25
Slightly well	15	29	0	0	15	14	25
Very well	35	14	54	57	25	41	42

#### The websites that respondents used to obtain data were:

- GTM website ([gtmnerr.org](http://gtmnerr.org))
  - <https://gtmnerr.org/visit/> (<https://gtmnerr.org/visit/>)
- SEACAR
- Johnson County weather stations
- SWMP
- National Weather Service Tide Data
- CDMO (<https://cdmo.baruch.sc.edu/>)
- <https://www.weather.gov/jax/fire> (<https://www.weather.gov/jax/fire>)

- [https://www.windfinder.com/tide/south\\_ponte\\_vedra\\_beach](https://www.windfinder.com/tide/south_ponte_vedra_beach) ([https://www.windfinder.com/tide/south\\_ponte\\_vedra\\_beach](https://www.windfinder.com/tide/south_ponte_vedra_beach))
- UF IFAS
- Florida DEP
- NOAA Digital Coast
- weather.gov
- <https://www.surf-forecast.com/breaks/South-Ponte-Vedra-Beach/tides/latest> (<https://www.surf-forecast.com/breaks/South-Ponte-Vedra-Beach/tides/latest>)
- iNaturalist (inaturalist.org)

**“Other” avenues for accessing data were:**

- From GTM files (employees)
- Weather Channel App
- FieldMaps, Survey123 apps using GTM Staff Access
- View on website (no download)
- Attending GTM info sessions or obtaining info from newsletter
- Newsletter info
- Directly ask staff
- Attending state of the reserve presentations.
- FWC data
- State sites
- Spot monitoring of salinity each week
- Google
- Call the Visitor center
- Email
- NOAA

**Disadvantages listed by respondents under “Other” were:**

- Various formats
- Login required
- Not current; hard to find on website (although once found, easy to access)
- Somewhat haphazard, almost anecdotal
- The info might not always be up to date
- Only available when presented by the staff.
- Not easy to view on mobile devices.
- Being a pain to the researchers
- SPOT weather forecast not available to general public
- Not as accurate as other salinity measuring techniques
- Not directly representative of the Guana System
- Website to download/access is cumbersome otherwise I'd do it myself. Want to make sure I am getting the latest data and I trust staff
- Not familiar with how to access it on my own
- Would be easier if online
- Sometimes inaccurate
- Lots of data, lots out of date, doesn't address current situation
- Need to call during hours of operation
- May have a plan on visit but then can't do what you planned
- Have to go to multiple places to get data
- Multiple sources required to find info
- Some information available in all trails from a user perspective not from the actual reserve
- Not all (Guana) data is available in SWMP CDMO
- Would be nice to have a public database *These are linked to specific datasets, this will be clarified in the final version of the report*

**In terms of usage of data, respondents added the following under “Other”:**

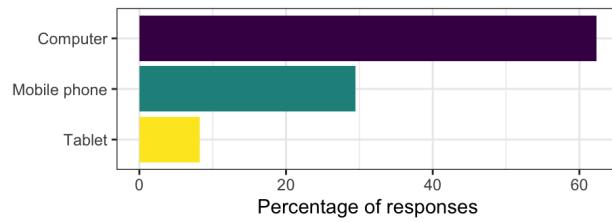
- Monitoring of invasive plant species sites for re-occurrence / growth
- Leisure
- Personal interest
- Helpful/useful during some of the volunteer programs
- Recreation
- Prescribed fire weather forecasts
- Vegetation management on lake
- Guana Dam management
- I would access it more if I knew how to get to the data

## 5. Dashboard preferences

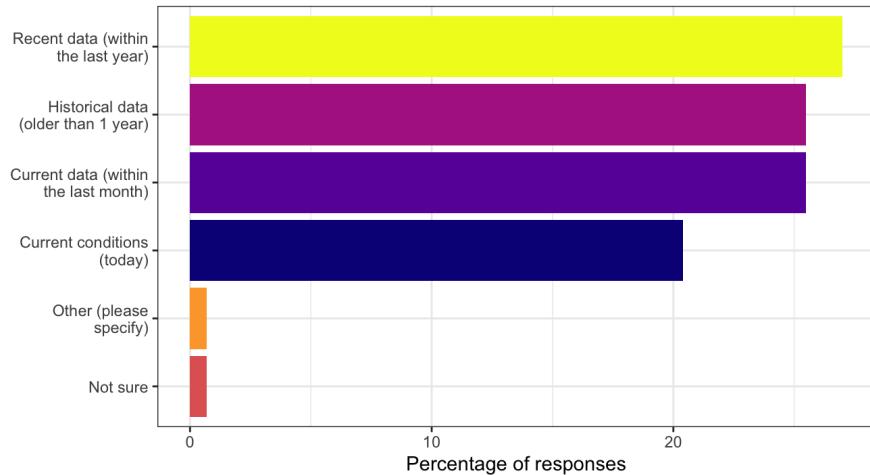
The survey asked respondents about their preferences regarding dashboard features (type and format of information, data delivery mode) and how they would access the dashboard.

By “dashboard” we meant a user interface on a computer display that presents (up-to-date) information with visualization tools such as graphs, charts, and tables - in a dynamic and interactive way.

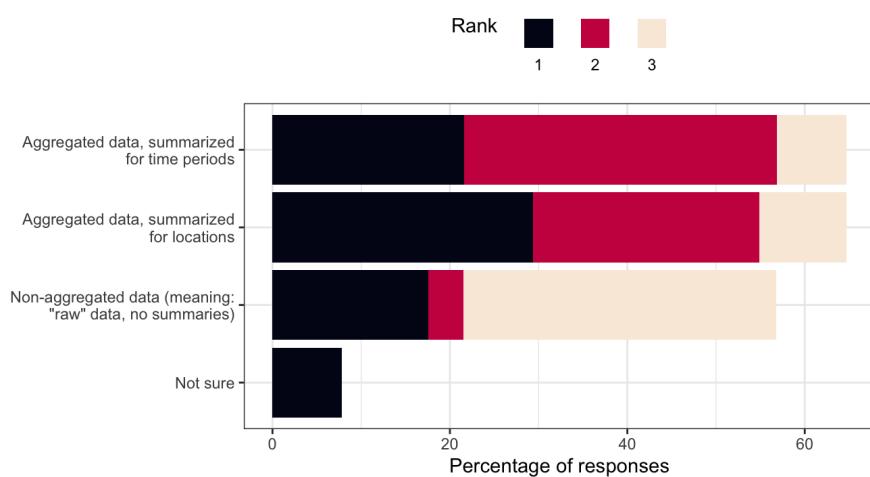
How would you prefer to access data?



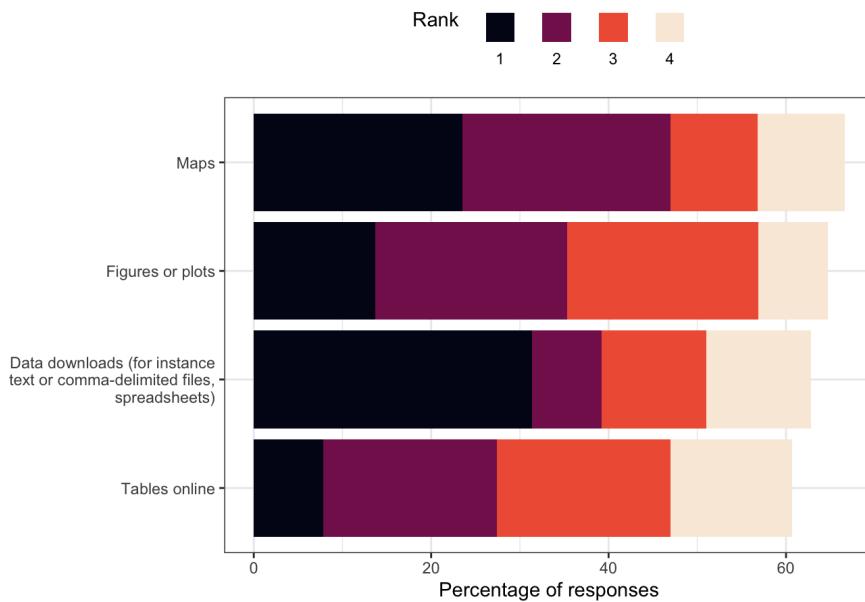
What type of information do you prefer?



What form of information do you prefer?



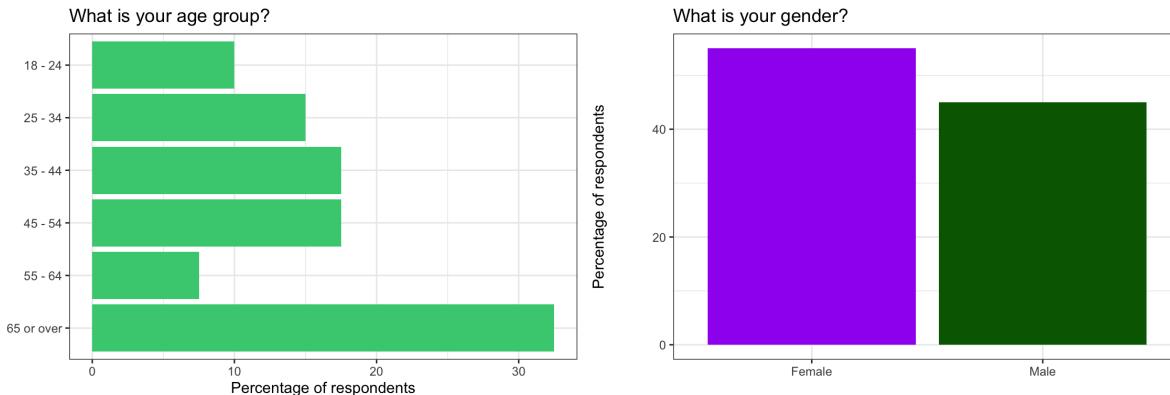
What format of data delivery would suit your needs best?



## 6. Characteristics of respondents

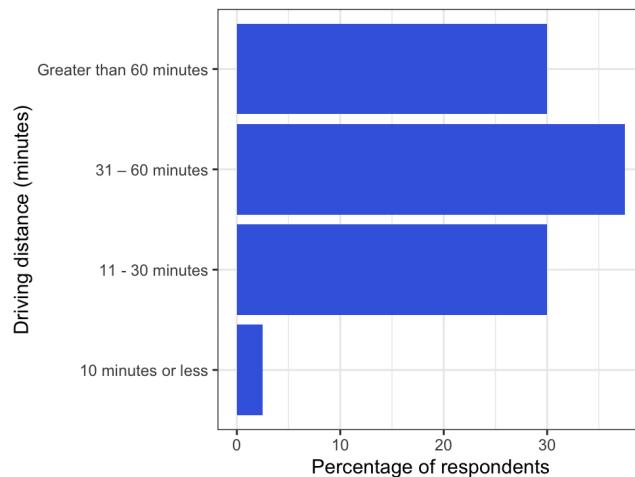
Finally, the survey requested demographic information from respondents. This helps the project team get a better understanding of the dashboard's target audience.

### 6.1 Age and gender



### 6.2 Distance from the GTM

How far are you from the GTM?



## Next steps

The project team will still refine details in this report, and distribute/publish the final version by the end of August 2023. The final report will also include dashboard design recommendations and considerations based on the survey results (and previous workshops).

To access the code that created this document, the survey result data, or jpg versions of the figures, go to <https://github.com/GTMNERR-Science-Transfer/Survey-results> (<https://github.com/GTMNERR-Science-Transfer/Survey-results>).

The project team has also started drafting a basic dashboard; we will be in touch soon about further steps on this, and to inform you of upcoming participation and discussion opportunities.

Suggestions and comments on this draft report are very welcome; please email Dr. Geraldine Klarenberg at [gklarenberg@ufl.edu](mailto:gklarenberg@ufl.edu) (<mailto:gklarenberg@ufl.edu>), or leave an “Issue” on the above linked GitHub repository.

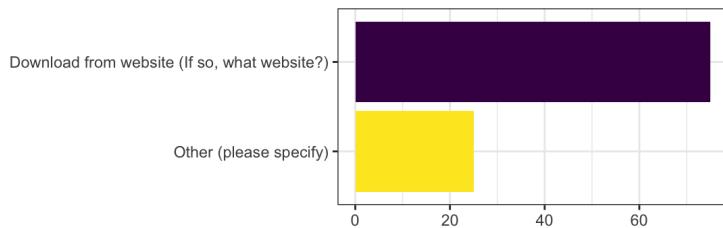
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## Appendix: Visualizations accompanying section 6

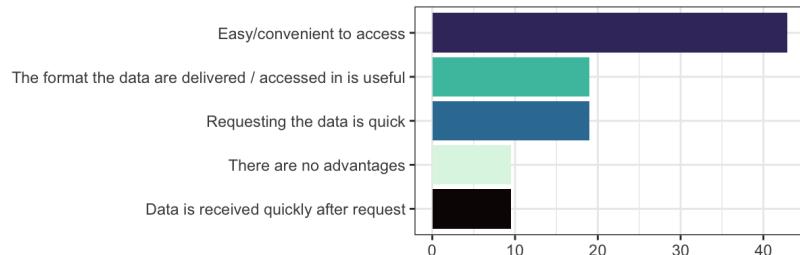
The figures below provide visual interpretations of the table in section 6, on the datasets that respondents have accessed.

## Weather information

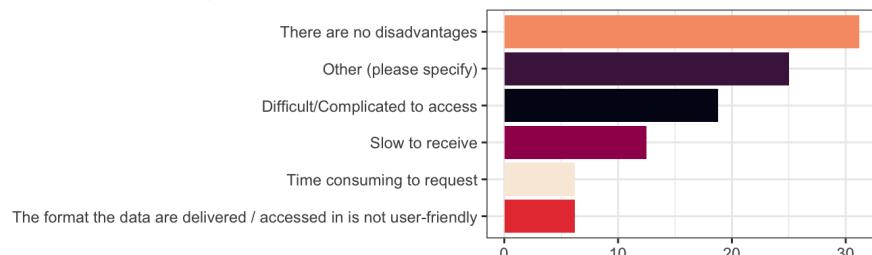
How do you most frequently obtain or access these data?



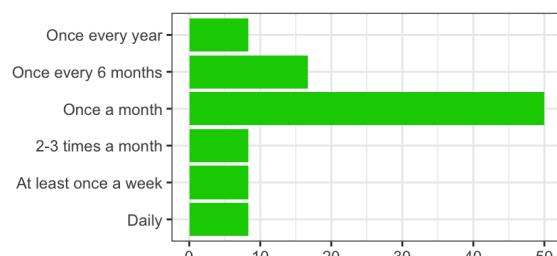
What are the advantages of this primary method of accessing or obtaining these data?



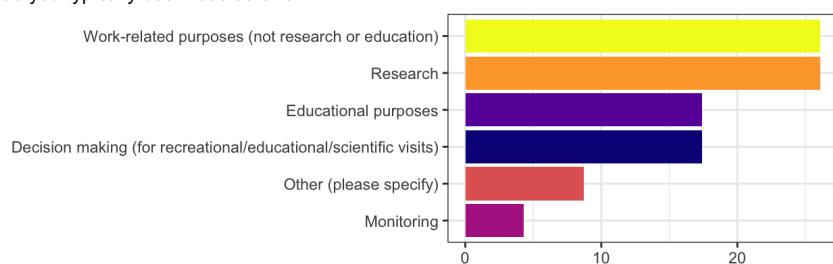
What are the disadvantages of this primary method of accessing or obtaining these data?



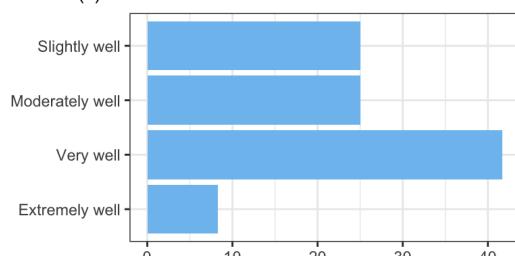
How often do/did you access or obtain these data?



What do you typically use these data for?



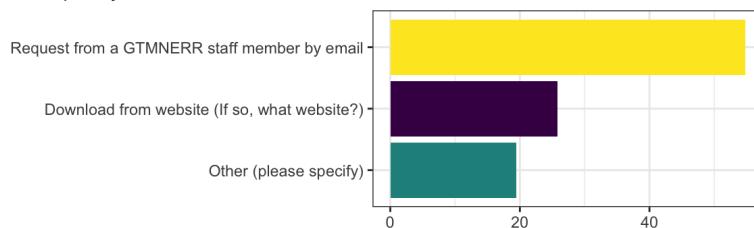
How well do these data generally satisfy your need(s)?



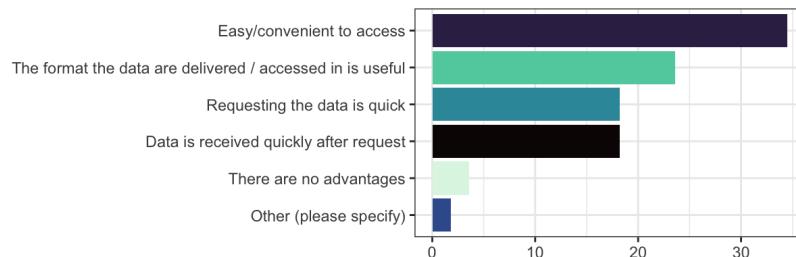


## Water quality information (including nutrients and algae)

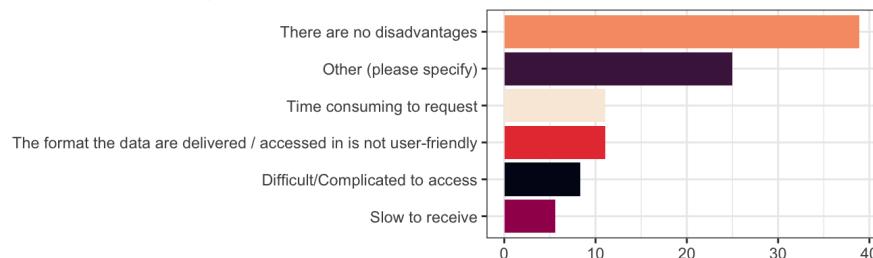
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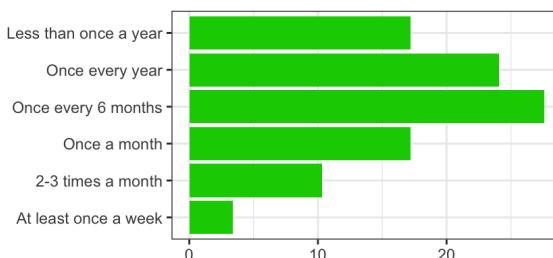
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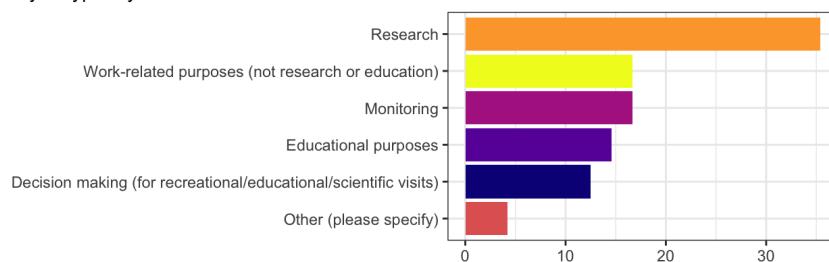
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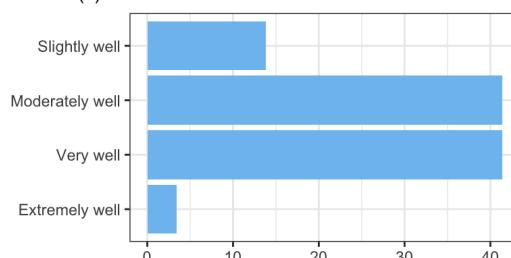
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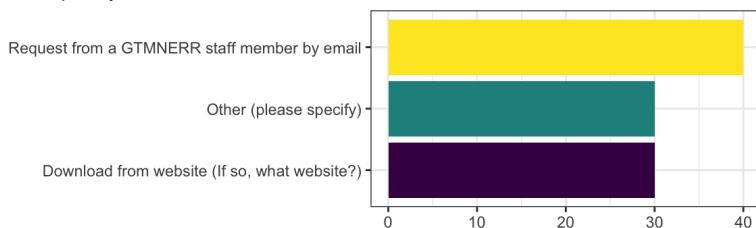
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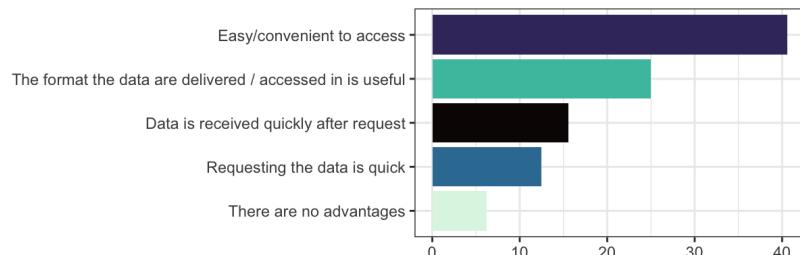


## Water level information (tides, Guana lake, river)

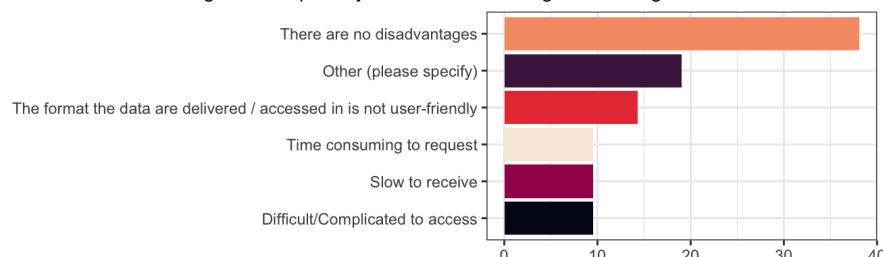
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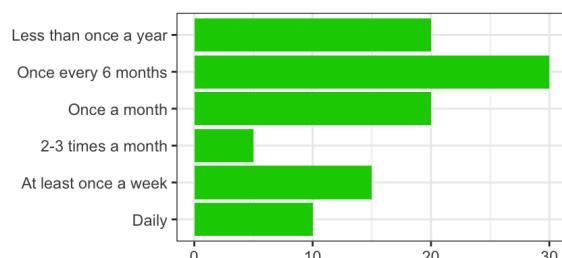
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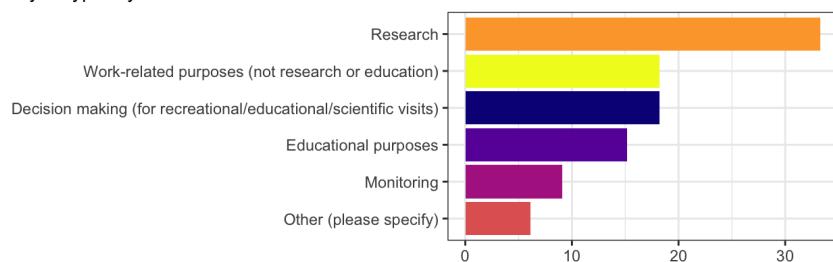
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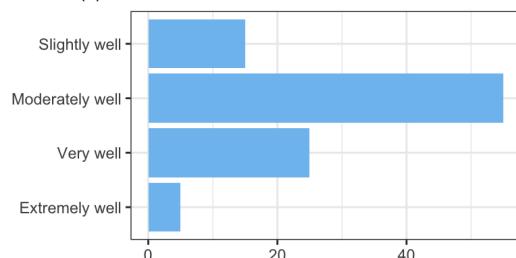
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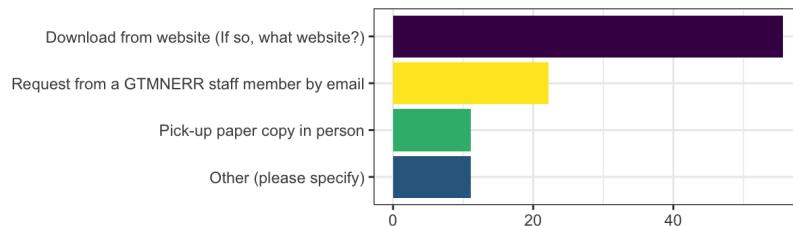
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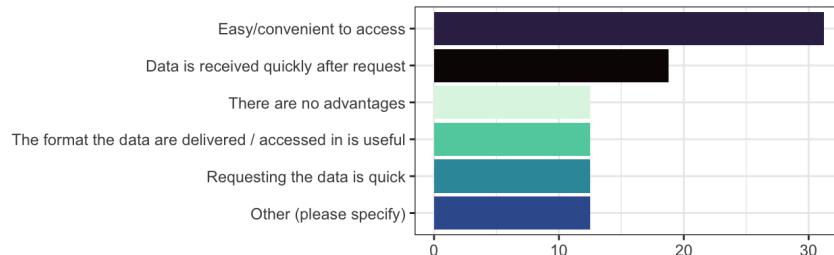


## Reserve or trail closures

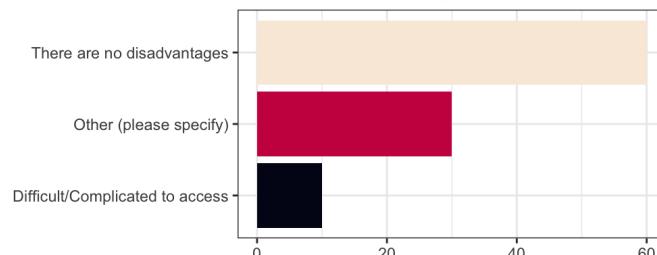
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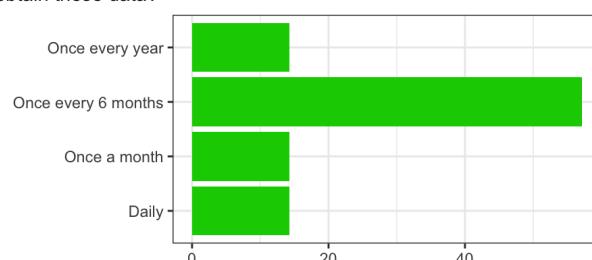
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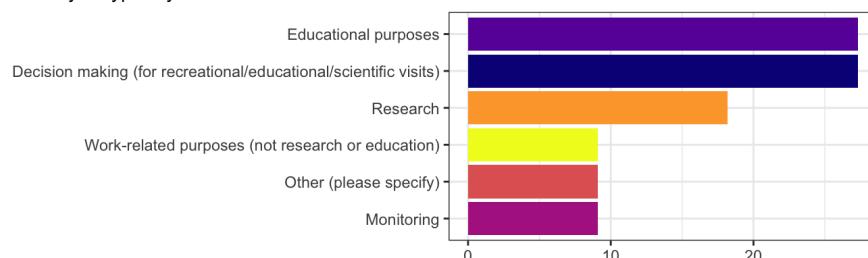
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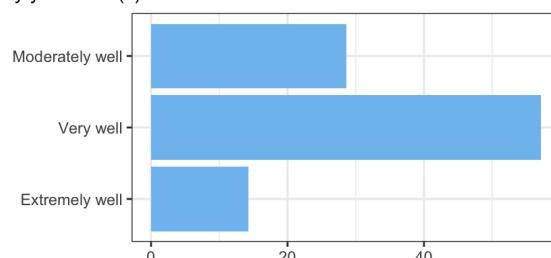
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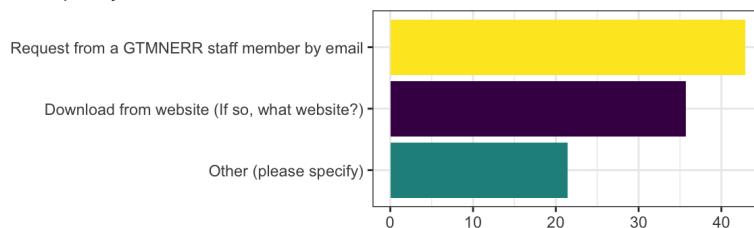
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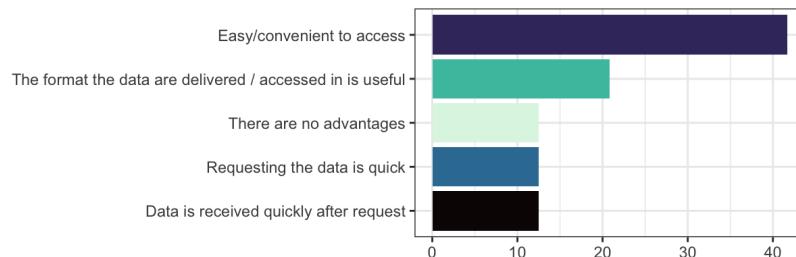


## Information on vegetation (salt marsh or uplands)

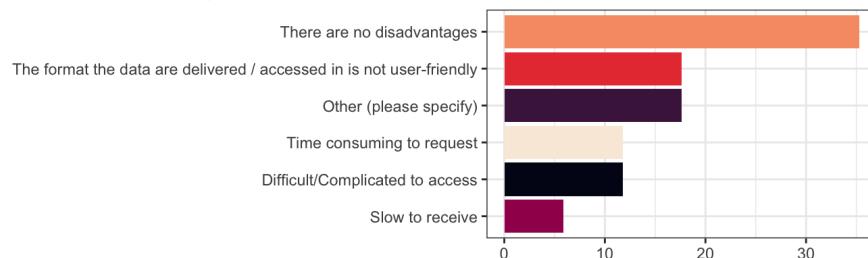
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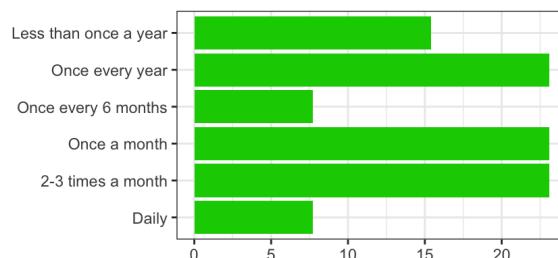
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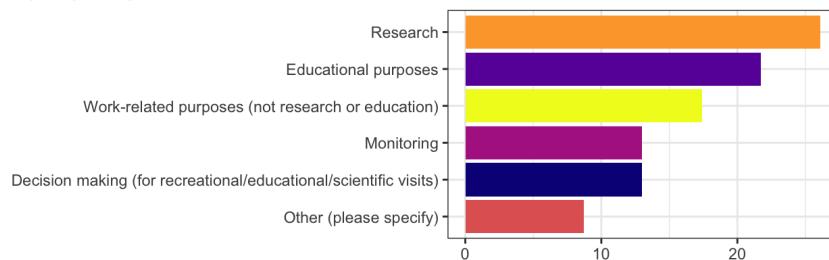
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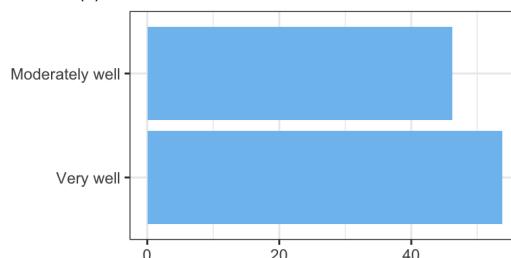
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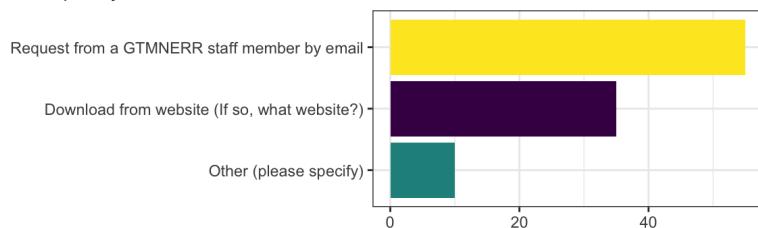
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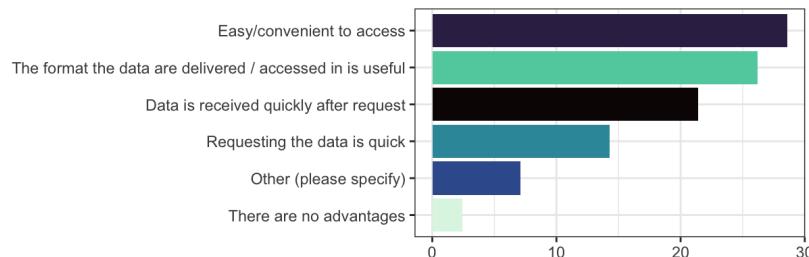


## Information on fish, shellfish or other aquatic organisms

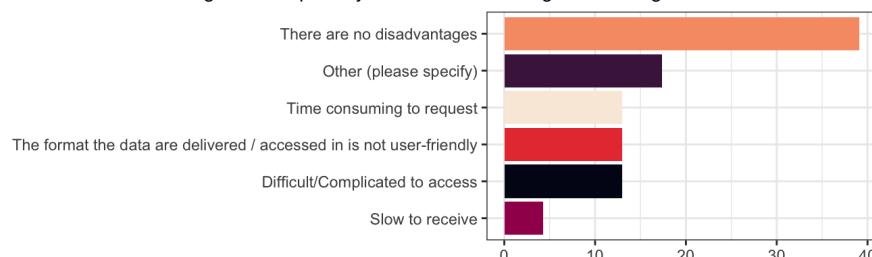
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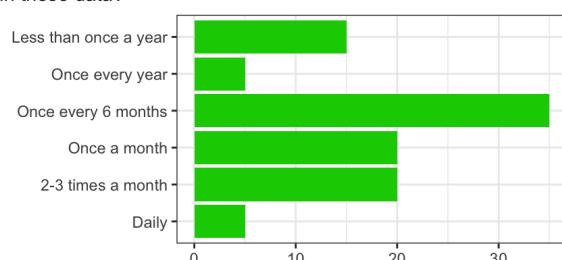
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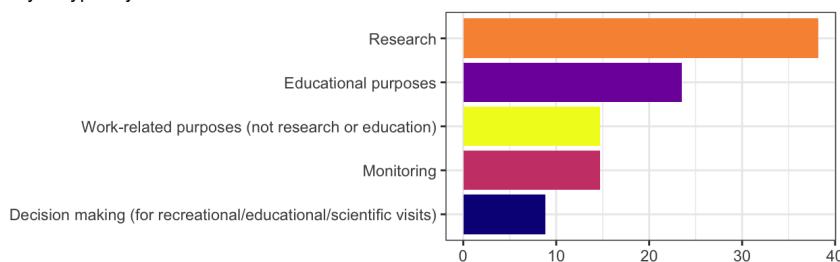
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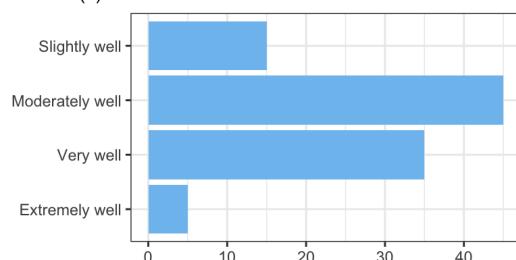
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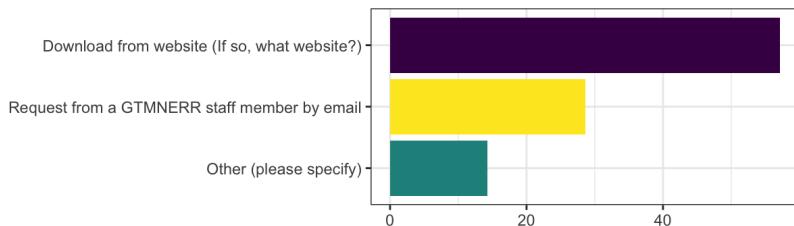
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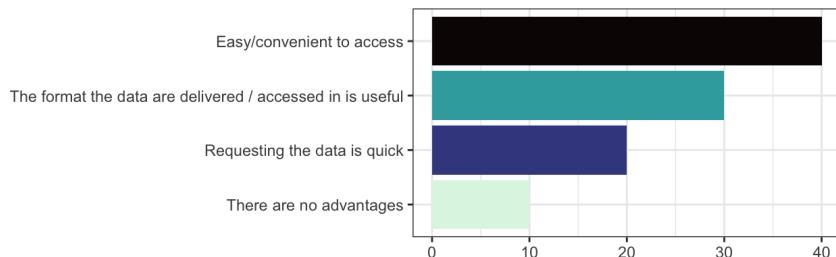


## Information on terrestrial animals

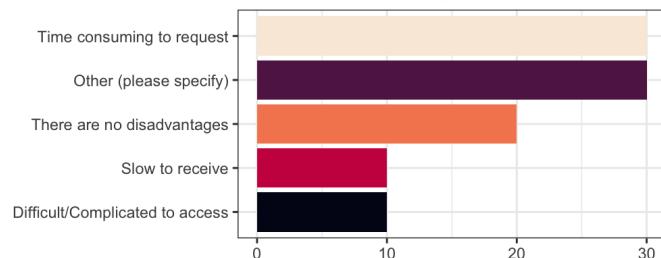
How do you most frequently obtain or access these data?



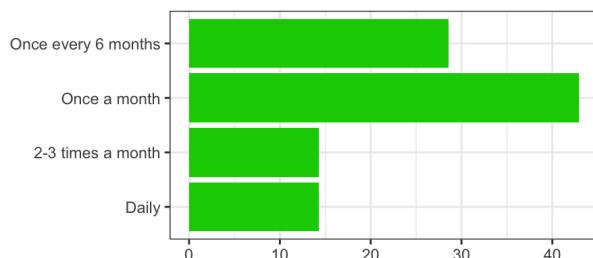
What are the advantages of this primary method of accessing or obtaining these data?



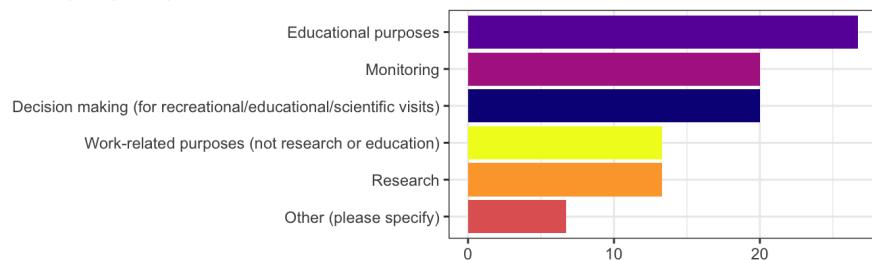
What are the disadvantages of this primary method of accessing or obtaining these data?



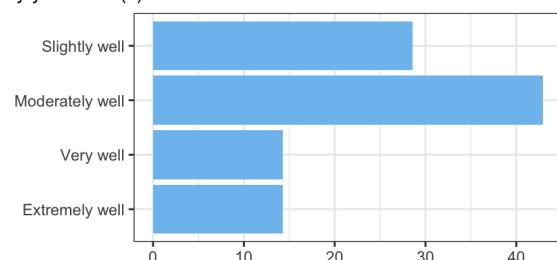
How often do/did you access or obtain these data?



What do you typically use these data for?



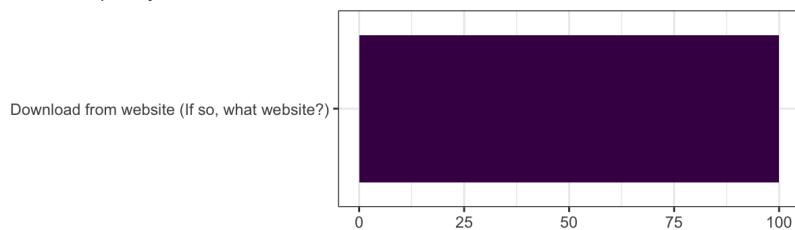
How well do these data generally satisfy your need(s)?



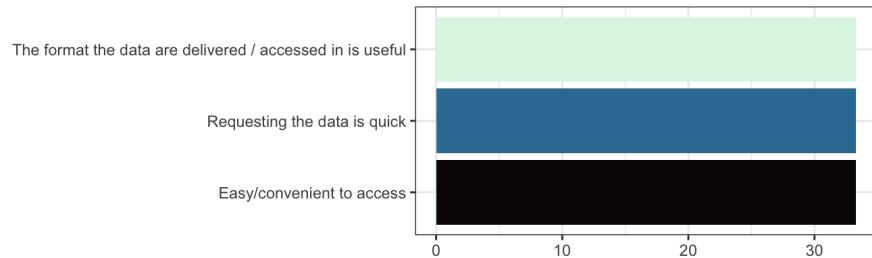


**Other (please specify)**

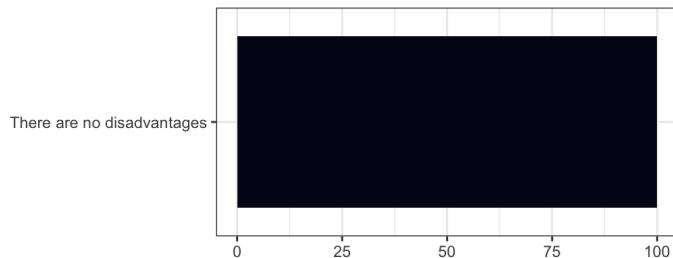
How do you most frequently obtain or access these data?



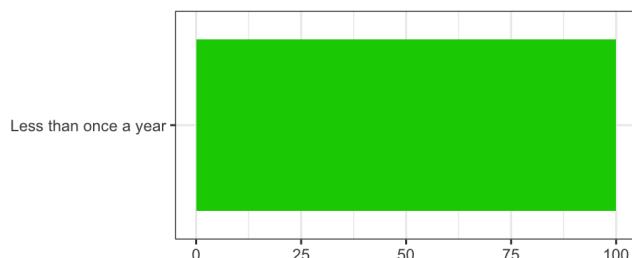
What are the advantages of this primary method of accessing or obtaining these data?



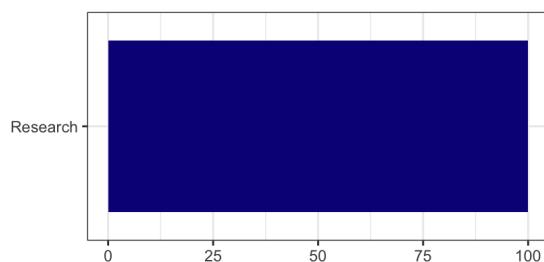
What are the disadvantages of this primary method of accessing or obtaining these data?



How often do/did you access or obtain these data?



What do you typically use these data for?



How well do these data generally satisfy your need(s)?

