



Expert Group: Data Management

Expert Group Participants:

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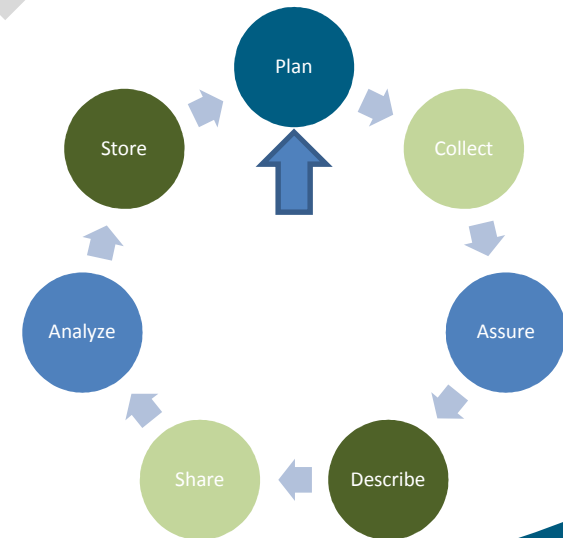




Citizen Science Program Component: *Data Management*

Recommendations: Broader Program

- **Education and outreach critical component**
 - Realize value of data being collected / Examples of impact
- **Data collected through citizen science (CS) are reliable**
 - CS certification program with on-going training opportunities
- **The Data Life Cycle**
 - Follow the project/program cycle
 - Includes data management plan, data policies, collection, storage, analysis, etc.





Citizen Science Program Component: *Data Management*

Recommendations: Broader Program

- **Work with existing infrastructure – FINs (e.g. ACCSP, GulfFIN)**
 - Centralized access to data
 - Programming capability
 - Project development will take time
- **CS Advisory Board (Oversight Committee)**
 - Review CS projects
 - Ensure projects meet data life cycle and standards
 - Provide feedback



Citizen Science Program Component: *Data Management*

Recommendations: Broader Program

- **Consider applicable mandates**
 - National Standard 2 / Information Quality Act
 - Public Access to Research Results (PARR)
- **Resources**
 - DataOne – documentation, data policy
 - CitSci.org – data entry/mgmt tools
 - Fishackathon – application development
 - FIN documentation - standards



Citizen Science Program Component: *Data Management*

Recommendations:

- **Data Access**
 - **Make the data open and available to the furthest extent possible**
 - **Confidentiality considerations/legal obligations must be met**
 - **Important to identify core driver for collection (data must be available at a level necessary to meet project objectives)**
 - **Accessibility includes data availability and ease of understanding; should tie back to education/outreach**



Citizen Science Program Component: *Data Management*

Recommendations:

- **Data Management Plan**
 - Consider collect, assure, store, and share
- **Data Policy**
 - Define degree of openness and accessibility for each project, one size doesn't fit all
 - Created in collaboration with participants
 - Research existing policies



Citizen Science Program Component: *Data Management*

Recommendations: Data Policy Framework

- **Ownership**
 - Data Collector
 - Funder / Funding Agency
 - Collecting Agency
 - Data Storage / Infrastructure Entity
 - End User Groups
- **Accessibility**
 - Sharing
 - Confidentiality
 - Presentation
- **End User Citation**
- **Data use guidelines/agreements**



Citizen Science Program Component: *Data Management*

Recommendations:

- **Infrastructure**
 - **Electronic data collection**
 - Paper can be used as tool
 - Paper forms would be entered electronically by the data collector
 - **Considerations**
 - Who is doing the data collection?
 - What data you are collecting?
 - Resources – available staff or trained volunteers



Citizen Science Program Component: *Data Management*

Recommendations:

- **QA/QC**
 - 1st level – Automated validation during data entry
 - 2nd level – Auditing (computer)
 - 3rd level – staff or trained volunteer (people)
- **Data Standards**
 - Citizen Science Level – adoption of FIN standards
 - Fit standards into existing projects if possible/necessary
 - New projects should have defined standards
- **Storage**
 - Long term storage (even for shorter projects)