NGDA Dataset Report

Official NGDA Title: Bailey's Ecoregions And Subregions Of The United States, Puerto Rico, And The U.S. Virgin Islands - Direct Download

Metadata Record Title: Bailey's Ecoregions And Subregions Of The United States, Puerto Rico, And The U.S. Virgin Islands - Direct Download

A–16 NGDA Theme: Biota

Executive NGDA Theme Champion(s):

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Metadata:

Registration Status: Complete

Registered on 3/26/2015

GeoPlatform Link*: https://www.geoplatform.gov/node/243/23f0e59d-4b74-40e7-9c76-2e0a5b977c86

Data.gov Metadata Link*: http://catalog.data.gov/harvest/object/f9d1ff0c-e68b-4e42-b422-92f8aafb6406/html

*If the metadata has been updated and reharvested after publication of this report, the link may no longer be valid. The dataset may be searched for manually in Data.gov or GeoPlatform.gov.

NGDA Lifecycle Maturity Assessment (LMA) Report

Time Frame:

Baseline assessment responses include data set activities from 1995 to 2015.

LMA Submission:

Status: Complete

Date: 10/27/2015

Extension Requested: Yes

LMA Reviewer(s):

Supervisor: Did not review

Theme Lead: Did not review

Executive Champion: Did not review

SAOGI*: Did not review

Other: Laurie Porth

LMA Verifier:

Name: Laurie Porth

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Attachments:

To get access to any attachments referenced in the report, email the LMA Help Desk at NGDA_LMA_help@fgdc.gov. Please use the subject "Dataset Report Attachment(s)" and indicate the associated official NGDA title.

*Senior Agency Official for Geospatial Information (SAOGI)

Lifecycle Maturity Assessment (LMA) Summary

Overall Maturity:

Mature; Consistent

General Questions: 100%

Optimized; Established

Stage 1 - Define/Plan: 50%

Managed; Predictable

Stage 2 - Inventory/Evaluate: 100%

Optimized; Established

Stage 3 - Obtain: 100%

Optimized; Established

Stage 4 - Access: 75%

Mature; Consistent

Stage 5 - Maintain: 100%

Optimized; Established

Stage 6 - Use/Evaluate: 44%

Transition; Transformation

Stage 7 - Archive: 100%

Optimized; Established

NGDA Dataset Maturity Definitions:

How To Calculate Maturity: https://www.geoplatform.gov/sites/default/files/How_to_Calculate_Maturity.pdf

Maturity	Maturity Characteristics for All Lifecycle Stages
Optimized; Established Rank = 5	Dataset meets virtually all business needs of all users. The dataset is considered authoritative by owners and secondary users. It is curated across all stages of the approved lifecycle. Future needs are defined on a regular basis and resources for addressing both current and future business requirements are available.
Mature; Consistent Rank = 4	Dataset meets all the business needs of the primary owner and most of the secondary users. The dataset is curated and used as authoritative by the primary owner. Dataset is used widely by secondary users actively engaged in sustaining the dataset. Future needs are identified and steps are planned to address these. All stages are supported and reviewed on a recurring basis. The dataset is well managed in relation to the approved lifecycle.
Managed; Predictable Rank = 3	Dataset meets a significant number of the business needs of the primary owner and is widely used as an authoritative resource by secondary users. Benchmark activities are occurring in at least four of the approved lifecycle stages. Management practices in relation to the approved lifecycle is moderate but consistent. Dataset is integrating changing business requirements in lifecycle stages impacting overall maturity.
Transition; Transformation Rank = 2	Dataset meets business needs of the primary owner and has moderate use by secondary users. Benchmark activities are occurring in at least three stages. Efforts to integrate funding, include partners, and obtain data are not supported in a sustained manner. Management practices in relation to the stages of the approved lifecycle is limited.
Planned; Initial Development Rank = 1	Dataset limited in meeting business needs of the primary owner. Benchmark activities in the approved lifecycle are just starting to consider secondary uses, partnerships are forming to support additional dataset uses. Dataset development is in a very early stage. Minimal or limited management against the benchmarks in the approved lifecycle.
No Activity Rank = no activity	Dataset meets project or local business needs of the primary owner, secondary or additional uses or users were not considered, not recognized as an authoritative data or is part of a similar dataset. Not managed to any of the benchmarks in the approved lifecycle.

General Questions for All Stages

1) Is there a recurring process to obtain funding for all lifecycle stages of this dataset?

Answer: Funding support is part of agency budget on a recurring basis, funding is consistent and tied to business processes, and supports all lifecycle stages.

Justification Comment: **Attachment(s):** 0

Dataset is static. Data have been fully developed at the beginning of its active life cycle (1995) and no further modifications are planned. Funding is in place to staff archive processes.

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2) Is there a process in place to ensure that open government and transparency guidelines are followed in all lifecycle stages for this dataset?

Answer: Process is published as appropriate with respect to sensitivity requirements, process is transparent, published appropriately.

Justification Comment: **Attachment(s):** 0

The process used in creating, updating, and maintaining Level IV ecoregions is fully documented in the dataset metadata. All processing steps over time are clearly articulated in the metadata processing steps, logical consistency issues are noted, and all historic
peer reviewed published papers concerning the approach to creating ecoregions are cited in the metadata.
Publications: http://www.fs.fed.us/rm/ecoregions/publications/
Metadata: http://www.fs.fed.us/rm/ecoregions/downloads/ecoregions-united-states/data-sets/eco-us-metadata.htm

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3) Are there processes and tools in place so that staff are sufficiently knowledgeable to ensure a continuity of the dataset for all stages of the lifecycle, especially during staffing transitions?

Answer: Processes and tools to ensure dataset continuity are in place and implemented for all lifecycle stages.

Justification Comment: **Attachment(s):** 0

There are no more updates to this data. Data are open as mentioned above in the final life stage of this data. As part of archival, staff are trained in awareness of data location and data matter experts. This assessment is for 1995 through 2015.

STAGE 1 - Define/Plan

4) Are user and business requirements defined and formalized?

Answer: Ad hoc process is used for involving Partners/stakeholders in identifying requirements.

Justification Comment: **Attachment(s):** 0

No involvement - data are static since 1995 and are being archived.
This assessment is for 1995 through 2015.

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5) How are partners/stakeholders involved in the requirements collection process?

Answer: Not Applicable (NA).

Justification Comment: **Attachment(s):** 0

Not Applicable, data are static and archived.
The data were created in 1995 in collaboration with field experts and was supported by funding from multiple organizations that provided requirements. No more requirements have been or will be collected.
This assessment is for 1995 through 2015.

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6) Is there a quality assurance process for the dataset?

Answer: No.

Justification Comment: **Attachment(s):** 0

No - data are static, archived. Quality assurance was completed during creation (1995). Archival process will ensure that there are not data degradations.

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7) Is there a process to evaluate the sensitivity, privacy, and confidentiality of this dataset?

Answer: Sensitivity, privacy, and confidentiality evaluations fully implemented, reviewed and updated on a recurring basis.

Justification Comment: **Attachment(s):** 0

Process is fully mature. Data are open and do not have any sensitive, private, or confidential. No PII. Data have been in the public domain for decades.

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8) Are defined data standards used in collecting, processing, and/or rendering the data?

Answer: Standards fully implemented documented and published as appropriate.

Justification Comment: **Attachment(s):** 0

The data set standards are referenced in metadata and are documented in publications documenting the creation of this data set (http://www.fs.fed.us/rm/ecoregions/publications/).

Standards are outlined in http://www.fs.fed.us/rm/ecoregions/docs/publications/identifying-ecoregion-boundaries.pdf

Twenty standard principles, including:

1. The series of ecoregions should express the changing nature of the climate over large areas.
2. Boundaries of ecoregions coincide with certain climatic parameters.
3. Fine-scale climatic variations can be used to delineate smaller ecological regions
4. Boundaries should capture the effect of mountains on climate.
5. A uniform pattern of mountain zonation is repeated over a climatic zone, which is the basic element in regionalizing mountainous territories.
6. Ecoregional boundaries should delineate groups of upland sites with similar characteristics.
7. The mosaic of ecosystems found in major transitional zones (ecotones) should be delineated as separate ecoregions.
8. Context is often as important as content in mapping ecological regions, depending on scale.
9. Because subsystems can be understood only within the context of the whole, a classification of ecoregions begins with the largest units and successively subdivides them.
10. The factors used to recognize ecoregions should be relatively stable.
11. Boundaries should circumscribe large, contiguous areas.
12. Potential vegetation, in contrast to actual, or real, vegetation, is useful in capturing ecological regions.
13. An understanding of the relationships between successions on identical landform positions in different climates is useful for establishing meaningful ecological regions.
14. Geologic factors might modify zonal boundaries.
15. Establishing a specific hierarchy of ecoregional boundaries should be based on understanding the formative processes that operate to differentiate ecoregions at various scales.
16. Criteria for setting ecoregion boundaries should be explicit in how regions are identified on the basis of comparable likenesses and differences.
17. The limits of geographic ranges of species and races of plants and animals are not fully satisfactory criteria for determining the boundaries of ecoregions.
18. Ecoregions should have greater ecological relevance than large physiographic land units.
19. Ecoregion boundaries should have greater ecological relevance than watersheds (or basins or hydrologic units)

20. The boundaries of ecoregions emerge from the study of spatial coincidences, patterning, and relationships, of climate, vegetation, soil, and landform

perform as more than just written descriptors of ecoregion boundaries. They also serve as hinge points for interpreting data required to define ecoregions and their boundaries, plus they serve as test points for analyzing specific sites in field situations. Determining a landscape area's legitimacy as an ecoregion depends not on satisfying some portion of these principles but in satisfying all of them.

Further description of data processes and standards can be found in: Bailey, Robert G. Description of the ecoregions of the United States (2nd ed.). 1995. Misc. Pub. No. 1391, Map scale 1:7,500,000. USDA Forest Service

STAGE 2 - Inventory/Evaluate

9) Is there a process for determining if data necessary to meet requirements already exist from other sources (either within or outside the agency) before collecting or acquiring new data?

Answer: Process for determining appropriate data is being reused fully implemented, reviewed, and updated on a regular basis.

Justification Comment: **Attachment(s):** 0

Process for determining if data necessary to meet requirements already exist from other sources is complete and fully implemented.

New data are not collected, the process of delineating ecoregions is referenced in the metadata, ecoregion delineation was completed in 1995 and further modifications have not occurred since nor are anticipated into the future.

STAGE 3 - Obtain

10) Is there a process for obtaining data in relation to this dataset?

Answer: Process is fully implemented, reviewed and updated on a regular basis.

Justification Comment: **Attachment(s):** 0

The process for obtaining data in relation to this data set is fully implemented. Original data were obtained as part of the project plan's process in 1995. As of 2015 the data are in the Forest Service Research Data Archive system.
New data are not obtained as part of the process - the data are in the Archival life cycle stage.
Ancillary data used in original delineation is referenced in the metadata.

11) Is the metadata in a FGDC endorsed geospatial metadata standard?

Answer: Metadata is available in a format endorsed by the FGDC, it fully describes the dataset and provides all the information required to make the dataset discoverable, accessible, and usable.

Justification Comment: **Attachment(s):** 0

Metadata is fully FGDC compliant.
http://www.fs.fed.us/rm/ecoregions/downloads/ecoregions-united-states/data-sets/eco-us-metadata.htm

12) How complete is the geographic coverage as defined in the requirements for the dataset?

Part 1 Answer: Business requirements for cyclic updates identified and a process is in place.

Part 2 Answer: Dataset has presently attained the greatest geographic coverage as defined by the current requirements or roughly 100%.

Justification Comment: **Attachment(s):** 0

Data set completely covers all 50 states, Puerto Rico and Virgin Islands at NMAS standards (0.0.000278 degrees resolution).

These data are intended for geographic display and analysis at the national level, and for large regional areas. The data should be displayed and analyzed at scales appropriate for 1:7,500,000-scale data.

STAGE 4 - Access

13) Do you have a process for providing users access to the data in an open digital machine readable format?

Answer: Process is developed, documented, and beginning to be implemented.

Justification Comment: **Attachment(s):** 0

Data is publicly available as Esri shapefiles with corresponding metadata via http://www.fs.fed.us/rm/ecoregions/products/map-ecoregions-united-states/.

Data was originally delineated on paper maps,digitized using a digitizing tablet as Esri coverage files, and converted to shapefiles
in ensuing years.

Maps are available in multiple image formats (jpeg, tiff, eps, ai) and sizes for display.

Data will be transferred to the USDA FS Research Data Archive in the 2016 Fiscal Year.

STAGE 5 - Maintain

14) Is there a maintenance process for updating and storing the dataset?

Answer: Dataset maintenance process is fully implemented and processes are reviewed and periodically updated.

Justification Comment: **Attachment(s):** 0

The data set was developed and published in 1995 and in 2015 the data set is transferring to the USDA Forest Service Research Data Archive following standard Research Data Archive processes. Metadata will be validated and corrected at that time by the data author. No further changes or maintenance should be required after transfer to archive.

15) Is there an error correction process as part of dataset maintenance?

Answer: Error correction process includes user notification, process reviewed on a recurring basis.

Justification Comment: **Attachment(s):** 0

No errors were identified between the beginning of the time frame (1995) and currently.
In the Archival stage of the data's lifecycle there is a process to intake user-identified errors and update data sets as part of the data quality initiatives of USDA FS Research and the Research Data Archive. Following the Data Quality Act, when data errors are found, they are repaired with coherence with author or a note will be added to the metadata describing the issue.

STAGE 6 - Use/Evaluate

16) Is there a process to determine if the dataset meets user needs?

Answer: No.

Justification Comment: **Attachment(s):** 0

Data have been static from 1995 to present (2015). User needs were considered when data were

created but are no longer pursued as this data set is archived.

17) Is there a process to provide users information on how to access and properly use the dataset?

Answer: Process is fully implemented supporting access and proper use, process is reviewed on a recurring basis.

Justification Comment: **Attachment(s):** 0

Metadata and supporting publications explain how users should think of and use the data.

The authoritative source of this data is at the RMRS web site (http://www.fs.fed.us/rm/ecoregions) which provides basic information on how to access the data and how to interpret them. Supporting publications provide further details on use of data and detailed descriptions of data elements, specifically including the seminal document "Bailey, Robert G. Description of the ecoregions of the United States (2nd ed.). 1995. Misc. Pub. No. 1391, Map scale 1:7,500,000. USDA Forest Service".

Users also are able to easily find references to further publications describing the usage of this data on the publications page (http://www.fs.fed.us/rm/ecoregions/publications/) of the above web site.

18) Are the business processes and management practices assessed to meet changing technology?

Answer: Assessment process is being developed to take advantage of changing technology.

Justification Comment: **Attachment(s):** 0

No formal process for updates to changing technology in place,but has been occurring on an ad hoc basis between 1995 and 2015. Primary direction of change would be changes in geodata and metadata formats. Data are currently available in alternate formats (shapefile and ArcInfo coverage).

STAGE 7 - Archive

19) Is there an archiving process for the dataset?

Answer: Archival and disposition processes are fully implemented.

Justification Comment: **Attachment(s):** 0

The data was created in 1995 and in 2015 began the process to move into its final life cycle stage, Archival. The data is currently being moved through an established process into the USDA Forest Service's Research Data Archive (http://www.fs.usda.gov/rds/archive).