Jurisdiction
- JurisdictionID
- JurisdictionAbbreviation
- JurisdictionName

Ecoshape
- EcoshapeID
- PolygonGeometry
- JurisdictionID
- EcoshapeSourceID
- EcoshapeName
- ParentEcoregion
- ParentEcoregionFR
- Ecozone
- EcozoneFR
- MosaicVersion
- TerrestrialArea
- TerrestrialProportion

SpeciesEcoshape
- SpeciesEcoshapeID
- SpeciesID
- EcoshapeID
- RangeMapID
- Presence
- OccurrenceStatus
- OriginStatus
- MigrantStatus
- SpeciesEcoshapeNotes

SpeciesEcoshapeInputDataset
- SpeciesEcoshapeInputDatasetID
- SpeciesEcoshapeID
- InputDatasetID
- InputDataSummary

InputDataset
- InputDatasetID
- DatasetName
- DatasetOrganization
- DatasetContact
- DatasetSource
- DatasetType
- DateReceived
- Restrictions
- RawData

InputPointLinePolygon
- InputPointLinePolygonID
- Geometry
- InputDatasetID
- SpeciesID
- MinDate
- MaxDate
- Accuracy
- CurrentHistorical

EcoshapeSource
- EcoshapeSourceID
- EcoshapeSourceName
- EcoshapeSourceCitation

Species
- SpeciesID
- ScientificName
- CommonName
- NomCommune
- TaxonomicClass
- ClasseTaxonomique
- TaxonomicLevel
- ElementNationalID
- ElementCode
- GlobalTriggerA1
- NationalTriggerA1
- ExpertPercentInCanada
- ExpertID

BIOTICS_ELEMENT_NATIONAL
- ELEMENT_NATIONAL_ID
- ELEMENT_NATIONAL_RANK
- POPULATION
- ENDEMISM
- DISTRIBUTION_CONFIDENCE
- ETC

RangeMap
- RangeMapID
- RangeVersion
- RangeStage
- RangeDate
- RangeMetadata

Review
- ReviewID
- ReviewRequestID
- RangeMapID
- ReviewStatus
- DateStarted
- DateCompleted
- OverallStarRating
- ReviewNotes

SpeciesEcoshapeReview
- SpeciesEcoshapeReviewID
- SpeciesEcoshapeID
- ReviewID
- AddRemove
- SpeciesEcoshapeReviewNotes

SpeciesKBACriteria
- SpeciesKBACriteriaID
- SpeciesID
- GlobalNationalSite
- ProposedKBASiteID
- NumberMatureIndividuals
- AreaOccupancy
- AreaSuitableHabitat
- AreaRange
- NumberLocalities
- PopulationTrendNotes
- GeneticallyDistinctNotes
- NumberReproductiveUnits
- NumberMatureIndividualsProduced

Expert
- ExpertID
- ExpertName
- ExpertOrganization
- TaxaSpeciesExpertise
- GeographicScope
- ExpertNotes

ProposedKBASite
- ProposedKBASiteID
- PolygonGeometry
- Proposer
- NationalName
- InternationalName
- GeographyDesc
- KBACriteria
- Workplan
- DelineationStatus
- ProposalStatus
- NominationStatus
- ProposedKBASiteNotes

OtherSpatialDataRaster
- ID
- Attributes

OtherSpatialDataVector
- ID
- Geometry
- Attributes

ReviewRequest
- ReviewRequestID
- ExpertID
- SpeciesID
- DateInitiated
- LatestResponseDate
- LatestResponse
- LatestFollowupDate
- LatestFollowup
- ReviewRequestNotes

EBAR Integrated Data Mode v2 notes:

INTRO

1. Depicts normalized relational database storage independent of implementation technology(ies)
2. Intended to document requirements and guide implementations, realizing that the chosen implementation technology(ies) may impose/require some changes
3. A normalized database structure eliminates redundant information storage (e.g. the Species Name is stored only once) while using table relationships/joins to get related information for display, export, etc.
4. Each box represents a database table, with the table name and field/column names, with connector lines showing relationships between tables
5. Each table has an auto-generated primary key field (indicated by the key symbol); another field could be used as a primary key if it is guaranteed to be unique and stable
6. Highlight boxes coloured by component/deliverable as follows:
   - Purple = Ecoshape Mosaic
   - Blue = Species Range
   - Green = Species Information
   - Dark Orange = Data "Mined" from External Sources
   - Dark Red = Review
   - Light Blue = KBA Assessment

VISION

7. Ecoshapes are a foundational component of the EBAR project and perhaps our most important deliverable; we are endeavouring to make them well-described
8. Additional context for Ecoshapes will be made available through context layers (land cover, elevation, temperature, precipitation, etc.) from third parties such as Commission for Ecological Cooperation
9. Ecoshapes could become a new set of "ecoregions" in Biotics (e.g. NSC Ecoshapes 2020) and be a key element of a Canada-wide implementation of Biotics
10. SpeciesEcoshape has been designed to support uploading of EBAR results to Biotics as an Ecoshape-based Distribution-Natural (see http://help.natureserve.org/biotics/biotics_help.htm#Record_Management/Element_Files/Characterization_Abstracts/ECHAR_Ecoregion_spp.htm%3FTocPath%3DRecord%2520Management%7CSubject%2520Area%2520Help%7CElements%7CCharacterization%7CSpecies%2520Elements%7CDistribution-Natural%7C_____2)
11. Desirable to build database on a shared platform with the flexibility for team members to add tables and attributes, and limit access as appropriate
12. Experts/reviewers could be various types of knowledge holders (scientific, traditional, local, etc.) and get involved in various components of the project

DETAILS

13. SpeciesEcoshape.TerrestrialArea is the Ecoshape Polygon Area minus the area of overlapping lakes from a coarse-scale dataset such as the CEC Lakes and Large Rives of North America
14. BIOTICS_ELEMENT_NATIONAL should be a periodic (nightly?) automated export/import from NSC Central Biotics as per approach used in BC
15. Notes could be added to other tables
16. Potentially protect reviewer names from the public (perhaps a "keep private" option for each review); also, there may be different privacy concerns for those acting professionally vs. personally; may be most appropriate/conservative to not share reviewer details at all
17. InputData.CurrentHistorical could perhaps be assessed when setting SpeciesEcoshape.Presence (i.e. when auto-generating range maps), instead of when importing data (i.e. the fields may be redundant)
18. Consider adding "links" from Species or SpeciesKBACriteria to external references/maps such as IUCN redlist maps, or saving them as InputDataset.RawData
19. Consider same range mapping and review process for different ecoshapes (e.g. Olson et al. global ecoregions) or base data (e.g. watersheds); perhaps review tool could have flexible configuration for this

20. For data sharing/licensing agreements with data providers, where possible extend the agreements to reviewers (sharing would occur on request only and require the reviewers to also sign an agreement)
21. *SpeciesEcoshape:
- Presence values:
    i. Present
    ii. Presence Expected (which would be used in Stage 2 if the only evidence we have is expert opinion)
    iii. Historical
- OccurrenceStatus values (see http://help.natureserve.org/biotics/biotics_help.htm#Record_Management/Element_Files/Characterization_Abstracts/ECHAR_Occurrence_Status_ecospp.htm):
    i. C - Confident or certain
    ii. P - Predicted or probable
    iii. ? - Possible
    iv. X - Presumed extirpated
    v. N - Never was there
    vi. R - Reported but false
    vii. (null) - Not assessed or unknown
- OriginStatus values (see http://help.natureserve.org/biotics/biotics_help.htm#Record_Management/Element_Files/Characterization_Abstracts/ECHAR_Origin_Status_ecospp.htm):
    i. N - Native or natural
    ii. R - Re-introduced
    iii. I - Introduced
    iv. U - Unknown
    v. (null) - Not assessed
- MigrantStatus values (animals only; see http://help.natureserve.org/biotics/biotics_help.htm#Record_Management/Element_Files/Characterization_Abstracts/ECHAR_Migrant_Status_ecospp.htm):
    i. SC - Seasonal resident and confirmed breeder
    ii. SP - Seasonal resident and probable breeder
    iii. S? - Seasonal resident and possible breeder
    iv. SH - Seasonal resident and current nonbreeder, historical breeder
    v. SN - Seasonal resident and nonbreeder
    vi. YC - Year-round resident and confirmed breeder
    vii. YP - Year-round resident and probable breeder
    viii. Y? - Year-round resident and possible breeder
    ix. YH - Year-round resident and current nonbreeder, historical breeder
    x. YN - Year-round resident and nonbreeder
    xi. T - Transient
    xii. (null) - Non-migrant Element, or not assessed

22. **ProposedKBASite:
    - DelineationStatus values:
        i. Tentative
        ii. Final
    - ProposalStatus values:
        i. None
        ii. Submitted date
        iii. Accepted date
    - NominationStatus values:
        i. None
        ii. Submitted date
        iii. Accepted date
23. ***TaxonomicLevel values:
    - Species
    - Subspecies
    - Population
    - Variety