Ecological Data Exchange Specification (working title)

Table of Contents

Status: Draft - while the document is in draft, sections of the document may contain placeholders such as TBA and TBD.

1. Metadata

IRI	TBA
Title	Ecological Data Exchange Specification (working title)
Definition	This document lists the normative requirements for data aiming to conform to the TERN Ecosystem Surveillance Ecological Monitoring Protocols. It is to be used as the authoritative, human-readable list of individual requirements from which profile artefacts such as validators are derived from.
Created	2022-03-14
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Further information	This document is part of the Services Agreement for the provision of standardised ecological monitoring protocols and systems for data collection, storage and management. Procurement Number (PRN): 360 000 5101 Commonwealth of Australia as represented by the Department of Agriculture, Water and the Environment ABN 34 190 894 983 (**Department**) The University of Queensland as represented by TERN ABN 63 942 912 684 (**Service Provider**)

2. Preamble

2.1. Abstract

TERN Ecosystem Surveillance have developed 19 modules to standardise ecological monitoring protocols for data collection. The working title for the monitoring protocols is *TERN Ecosystem Surveillance Ecological Monitoring Protocols*.

TERN Data Services and Analytics is developing a standardised data exchange specification to support the exchange of data collected using TERN Ecosystem Surveillance Ecological Monitoring Protocols. The working title for the data exchange specification is *Ecological Data Exchange Specification*.

The Ecological Data Exchange Specification is a profile of the ecological data model TERN Ontology. Data that is conformant to the Ecological Data Exchange Specification is also conformant to the TERN Ontology.

2.2. Normative Status

This specification is normative for the exchange of data collected using TERN Ecosystem Surveillance Ecological Monitoring Protocols.

3. Requirements

3.1. Domain Model Conformance

Requirements define the rules and constraints which data must conform to in order to be valid.

A *status* is assigned to each requirement. The *status* code list used in this document is defined by the Registry ontology and a subset of the status codes are redefined here:

- `submitted` - A proposed entry which is not yet approved for use for use. Corresponds to ISO

19135:(redraft) 'submitted'.

- `invalid` - An entry which has been invalidated due to serious flaws, distinct from retrirement. Corresponds to ISO 19135(redraft) 'invalid'.
- `stable` - An entry that is seen as having a reasonable measure of stability, may be used to mark the full adoption of a previously 'experimental' entry.

3.1.1. Plot Description Module Conformance Class Requirements

3.1.1.1. Slope Observation

3.1.1.1.1. Feature type

Property	Value
Identifier	`urn:shapes:plot-description:slope:feature-type`
Label	Feature type
Definition	Instances of `tern:Observation` with `sosa:observedProperty` value of `TBA` *MUST* have a `tern:featureType` with the value `landform`.
Comment	TERN's ecologists have determined the feature type is "landform", defined by the Australian Soil and Land Survey Field Handbook.
Status	`submitted`
Conformance Classes	`TBA`
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	`/shapes/plot-description/slope/shapes.ttl`
Examples	Valid: `/shapes/plot-description/slope/valid.ttl` Invalid: `/shapes/plot-description/slope/invalid.ttl`

3.1.1.1.2. Simple result

Property	Value
Identifier	`urn:shapes:plot-description:slope:simple-result`
Label	Simple result
Definition	Instances of `tern:Observation` with `sosa:observedProperty` value of `TBA` *MUST* have a `tern:hasSiteVisit` relationship.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	`submitted`

Property	Value
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope/shapes.ttl
Examples	Valid: /shapes/plot-description/slope/valid.ttl Invalid: /shapes/plot-description/slope/invalid.ttl

3.1.1.1.3. Site visit

Property	Value
Identifier	urn:shapes:plot-description:slope:site-visit
Label	Site visit
Definition	Instances of tern:Observation with sosa:observedProperty value of TBA *MUST* have a tern:hasSiteVisit relationship.
Comment	Observations following the Plot Description protocol are made in the context of a site visit.
Status	submitted
Conformance Classes	TBA
Source	TERN Ecosystem Surveillance Ecological Monitoring Protocols
Validators	/shapes/plot-description/slope/shapes.ttl
Examples	Valid: /shapes/plot-description/slope/valid.ttl Invalid: /shapes/plot-description/slope/invalid.ttl

3.1.1.1.4. Slope type Observation

TBD.

3.2. TERN Ontology Conformance

TBD.