APO Metadata application profile v0.4

Document status

Version	Date issued	Comment
0.1	n/a	First draft. Unpublished. For circulation with trusted stakeholders
0.2	26 November 2018	Concept class added Event class removed Range declarations added Full lists for taxonomies < 100 terms in Example / References Uploaded to https://github.com/leskneebone/APO-MAP
0.3		typo "org:Organisation" corrected to "org:Organization" grid:hasRelated added to org:Organization class updated obligation for schema:pageStart apo:chapter removed (duplicated mods:partNumber) eprint namespace added foaf:openID property added to foaf:person class apo:journalTitle replaced by dcterms:isPartOf *References* section added. *Registrations* section added. datatype removed for schema:pageStart; schema:pageEnd skos:prefLabel replaces dcterms:title for org:organization class skos:altLabel replaces dcterms:alternate for org:organization class foaf:depiction added to skos:concept class dcterms:isPartOf range changed to range dcterms:bibliographicResource class modsrdf namespace replaces mods
0.4		changed *Range* column to *Datatype* added *Range includes* column

		changed *Example / References* column to *Notes*
		updated obligation for dcterms:abstract
		updated obligation for dcterms:description
		updated obligation for dcterms:temporal
		updated obligation for bibo:doi
		updated obligation for schema:articleBody
		updated obligation for dcterms:extent
		added note for apo:contentAssociation
		added note for apo:keyword
		added note for dcterms:subject
		updated vocabulary for dcterms:license
		updated vocabulary for org:purpose in og:organization
		removed duplicate apo:contentAssociation

Registrations

MARC

The Analysis & Policy Observatory is registered with the MARC Code List for Organizations (Library of Congress, 2017). The code "auhaapo" can be used to indicate APO as the original cataloguing source or as a prefix in APO identifiers.

Ontology

APO class matrix

name	RDF class	notes
Resources	dcterms:BibliographicResource	

Collection	dcterms:Collection	
Project	foaf:Project	
Organisation	org:Organization	
Person	foaf:Person	
Conference	dcterms:event	
Concept	skos:concept	AKA taxonomies

Namespaces

@prefix aglsterms: <http://www.agls.gov.au/agls/terms/> .
@prefix apo: <http://ontology/apo.org.au/> .
@prefix bibo: <http://purl.org/ontology/bibo/> .
@prefix dcterms: <http://purl.org/dc/terms/> .
@prefix eprint: <http://eprints.org/ep2/data/2.0/> .
@prefix foaf: <http://xmlns.com/foaf/0.1/> .
@prefix geo: <http://www.w3.org/2003/01/geo/wgs84_pos#> .
@prefix grid: <http://www.grid.ac/ontology/> .
@prefix modsrdf: <http://www.loc.gov/standards/mods/modsrdf/v1/> .
@prefix org: <http://www.w3.org/ns/org#> .
@prefix owl: <http://www.w3.org/2002/07/owl#> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix researchgraph: <http://researchgraph.org/schema/v2.0/xml/nodes> .
@prefix rifcs: <http://ands.org.au/standards/rifcs> .
@prefix schema: <http://schema.org/> .
@prefix scholix: <http://www.scholix.org/> .
@prefix skos: <http://www.w3.org/2004/02/skos/core#> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

Class tables

Resource

RDF Class:	dcterms:BibliographicResource
Definition	A book, article, or other documentary resource
Usage note	

Property	Namespace	Datatype	Range includes	Obligation	Notes
identifier	dcterms	xsd:anyURI		Recommended	local system URL of the resource landing page
doi	bibo	xsd:anyURI		Optional	
format	dcterms	xsd:string	Internet Media Types [MIME]	Mandatory	
title	dcterms	xsd:string		Mandatory	Includes 'subtitles' with punctuation delimiter (such as colon)
subTitle	modsrdf	xsd:string		Optional	"subTitle" includes a subtitle when it is desired to include it as a separate element. Alternatively, it may be included as part of a title.
description	dcterms	xsd:string		Recommended*	*Mandatory if dcterms:abstract is empty
abstract	dcterms	xsd:string		Recommended	Content limited to 400 characters
articleBody	schema	xsd:string		Not recommended	use in exceptional circumstances where full text needs to be captured within the metadata

backstory	schema	xsd:string		Optional	
issued	dcterms	w3c-dtf		Mandatory	
available	dcterms	w3c-dtf		Mandatory	System generated
modified	dcterms	w3c-dtf		Mandatory	System generated
creator	dcterms	xsd:string		Mandatory	
hasPrincipleInvestigator	rifcs	xsd:anyURI	foaf:person	Optional	Example: http://apo.org.au/node/127671 [Brydie-Leigh Bartleet]
publisher	dcterms	xsd:anyURI	org:Organization	Mandatory	Example: http://apo.org.au/node/283 [Australian Institute of Health and Welfare]
contentAssociation	apo	xsd:anyURI	org:Organization	Optional	An organisation that has a significant role in making the resource available but is not the publisher.

type	dcterms			Mandatory	Vocabulary:
					[Sound]
					    Audio
					    Audio interview
					    Audio presentation
					    Audio podcast
					[Text]
					    Annual Report
					    Draft report
					    Policy report
					    Report
					    Article
					    Bill
					    Blog post
					    Book
					    Book review
					    Briefing paper
					    Case study
					    Chapter

					Commentary
					Conference paper
					Conference proceedings
					Discussion paper
					Essay
					Evaluation
					Fact sheet
					Guide
					Infographic
					Journal
					Journal article
					Literature review
					Manifesto
					Policy
					Poster
					Preprint
					Presentation
					Slide film
					Statistics
					Strategy
					Submission
					Survey
					Systematic review
					Technical report
					Thesis
					Transcript
					Working paper
					Other text
					[Data]
					Dataset
					[Interactive resource]
					Database
					Data portal

					Website
					Other interactive resource
					[Collection]
					    Collection
					    Reports
					[Moving image]
					    Interview
					    Video

broadSubject	apo		Vocabulary: Built Environment Communication Culture Economics Education Health Indigenous International Relations Justice Natural Environment Politics Science Social Issues	Mandatory	
subject	dcterms			Mandatory	APO uses an unpublished taxonomy Example: Economics [https://apo.org.au/taxonomy/term/21120]
keyword	apo			Optional	
relation	dcterms	xsd:anyURI	dcterms:bibliogr aphicResource	Optional	
isPartOf	dcterms	xsd:anyURI	dcterms:bibliogr aphicResource	Optional	

references	scholix	-		-	[structured property]
basedOnData	scholix	xsd:anyURI	dcterms:dataset	Optional	attribute of scholix:references
hasVersion	dcterms	xsd:anyURI	dcterms:bibliographicResource	Optional	
source	dcterms	xsd:anyURI	dcterms:bibliographicResource	Optional	
replaces	dcterms	xsd:anyURI	dcterms:bibliographicResource	Mandatory*	*Mandatory where a Resource replaces a Resource that has been unpublished
isDerivedFrom	rifcs	xsd:anyURI		Not recommended	Superseded by scholix:basedOnData
spatial	dcterms	xsd:anyURI	geonames.org	Optional	
temporal	dcterms	w3c-dtf		Not recommended	See issue on datatype here: https://www.w3.org/2011/gld/track/issues/3
license	dcterms			Recommended	Vocabulary: All Rights Reserved CC BY CC BY-NC CC BY-NC-ND CC BY-NC-SA CC BY-ND CC BY-SA CC0 Open Government Licence v3.0
rights	dcterms	xsd:string		Recommended	
dateCopyrighted	dcterms	w3c-dtf		Optional	
accessRights	dcterms			Mandatory	Vocabulary: Open Paid subscription required Pay-per-view required Signup required
publicationPlace	apo	xsd:string		Optional	
partNumber	modsrdf	xsd:integer		Optional	

volume	apo	xsd:integer		Optional	
issue	apo	xsd:integer		Optional	
pageStart	schema			Optional	Mandatory where schema:pageEnd is not empty
pageEnd	schema			Optional	Recommended where schema:pageStart is not empty
bibliographicCitation	dcterms	xsd:string		Optional	
status	eprint	xsd:anyURI		Recommended	Value for a peer reviewed Resource is http://purl.org/eprint/status/PeerReviewed and is left empty if the work is not reviewed.
extent	dcterms	xsd:duration		Optional*	Recommended where dcterms:type is Sound OR Moving image
language	dcterms	xsd:string	RFC 4646	Recommended	

Collection

RDF Class:	dcterms:Collection
Definition	A collection is described as a group; its parts may also be separately described.
Usage note	

Property	namespace	Datatype	Range includes	Obligation	Notes
identifier	dcterms	xsd:anyURI		Recommended	repeatable with different schemes, e.g. DOI; APO
collectionType	apo	vocabulary		Mandatory	Vocabulary: Conference Collection Geographic Collection Research Collection Series Collection

hasPart	dcterms	xsd:anyURI	dcterms:bibliographicResource	Mandatory	
title	dcterms	xsd:string		Mandatory	Includes 'subtitles' with punctuation delimiter (such as colon)
description	dcterms	xsd:string		Mandatory	
abstract	dcterms	xsd:string		Recommended	Typically short enough to display in full in search results
featured	apo	xsd:anyURI	dcterms:bibliograhicResource	Recommended	
issued	dcterms	w3c-dtf		Mandatory	
available	dcterms	w3c-dtf		Mandatory	System generated
modified	dcterms	w3c-dtf		Mandatory	System generated
creator	dcterms	xsd:string		Mandatory	
sponsor	schema	xsd:anyURI	org:Organization	Recommended	
depiction	foaf	xsd:anyURI		Recommended	
type	dcterms			Mandatory	Vocabulary: Conference Collection Geographic Collection Research Collection Series Collection
subject	dcterms			Mandatory	APO uses an unpublished taxonomy Example: Economics [https://apo.org.au/taxonomy/term/21120]
spatial	dcterms			Optional	
temporal	dcterms	w3c-dtf		Optional	
license	dcterms			Recommended	Vocabulary: All Rights Reserved CC BY CC BY-NC CC BY-NC-ND CC BY-NC-SA

					CC BY-ND CC BY-SA CC0 Open Government Licence v3.0
rights	dcterms	xsd:string		Recommended	
dateCopyrighted	dcterms	w3c-dtf		Recommended	
accessRights	dcterms			Mandatory	Vocabulary: Open Paid subscription required Pay-per-view required Signup required
language	dcterms	RFC 4646		Recommended	
available	dcterms	w3c-dtf		Mandatory	system generated
modified	dcterms	w3c-dtf		Mandatory	system generated

Project

RDF Class:	foaf:Project
Definition	a collective endeavour of some kind
Usage note	

Property	namespace	Datatype	Range includes	Obligation	Notes
arc	rifcs	xsd:string	http://www.arc.gov.au/grants-dataset	Recommended	Example: LP150100522
raid	rifcs	xsd:anyURI		Recommended	
funder	researchgraph	xsd:anyURI	org:Organization	Recommended	Example: http://apo.org.au/node/59202 [Australian Research Council]
fundingScheme	researchgraph	xsd:string	http://www.arc.gov.au/grants	Mandatory*	Mandatory when funder is ARC Australian Laureate Fellowships Discovery Early Career Researcher Award Discovery Indigenous Discovery Projects Future Fellowships ARC Centres of Excellence Industrial Transformation Research Program Learned Academies Special Projects Linkage Infrastructure, Equipment and Facilities Linkage Projects Special Research Initiatives

					Mandatory where funder is Tertiary Education Commission [NZ]; range includes: http://www.tec.govt.nz/funding/funding-and-performance/funding/current-funds/
isManagedBy	rifcs	xsd:anyURI	org:Organization	Recommended	Example: http://apo.org.au/node/82220 [Griffith University]
hasMember	rifcs	xsd:anyURI	org:Organization	Optional	Example: http://apo.org.au/node/83847 [Queensland Conservatorium Research Centre]
title	dcterms	xsd:string		Mandatory	
alternative	dcterms	xsd:string		Optional	Includes acronyms and former titles
description	dcterms	xsd:string		Mandatory	
subject	dcterms			Mandatory	APO uses an unpublished taxonomy Example: Economics [https://apo.org.au/taxonomy/term/21120]
keyword	apo			Optional	[Source=local] Indigenous arts centres; Creative economy
subject	dcterms			Optional	[Source= anzsrc-for] http://purl.org/au-research/vocabulary/anzsrc-for/2008/190499 [Performing Arts and Creative Writing not elsewhere classified]
spatial	dcterms	xsd:anyURI	https://www.geonames.org/	Recommended	Example: http://sws.geonames.org/11523984 [Barkly]
spatial	dcterms	xsd:string	iso3166-1	Recommended	Example: AU
start-year	researchgraph	W3C-DTF		Recommended	Example: 2016
end-year	researchgraph	W3C-DTF		Recommended	Example: 2019
participant_list	researchgraph	xsd:anyURI	foaf:person	Recommended	Example: http://apo.org.au/node/127676 [Sandy O'Sullivan]

hasPrincipleInvestigator	rifcs	xsd:anyURI	foaf:person	Recommended	Example: http://apo.org.au/node/127671 [Brydie-Leigh Bartleet]

Organisation

RDF Class:	org:Organization
Definition	An organization
Usage note	Represents a collection of people organized together into a community or other social, commercial or political structure. The group has some common purpose or reason for existence which goes beyond the set of people belonging to it and can act as an Agent. Organizations are often decomposable into hierarchical structures.

Property	namespace	Datatype	Range includes	Obligation	Notes
identifier	dcterms	xsd:anyURI	https://www.grid.ac/	Recommended	
prefLabel	skos	xsd:string		Mandatory	
altLabel	skos	xsd:string		Optional	Includes acronyms and former titles
description	dcterms	xsd:string		Mandatory	
subOrganizationOf	org	xsd:anyURI	org:Organization	Optional	
hasRelated	grid	xsd:anyURI	org:Organization	Optional	
purpose	org			Recommended	Vocabulary: Company Education Government High-level global forum Media Not for profit Other Political party Think Tank
function	aglsterms	xsd:anyURI	https://data.naa.gov.au/def/agift/AGIFT	Recommended	

spatial	dcterms	xsd:string		Recommended	range includes alpha-2 codes from ISO-3166 https://www.iso.org/iso-3166-country-codes.html

Person

RDF Class:	**foaf:Person**
Definition	A person
Usage note	The Person class represents people. Something is a Person if it is a person. We don't nitpic about whether they're alive, dead, real, or imaginary.

Property	namespace	Datatype	Range includes	Obligation	Notes	Protective marking
openID	foaf	xsd:anyURI	https://orcid.org/; https://www.scopus.com	Recommended		Unclassified
name	foaf	xsd:string		Optional	System generated via concatenation of foaf:firstName AND foaf:lastName	Unclassified
firstName	foaf	xsd:string		Mandatory		Unclassified
lastName	foaf	xsd:string		Mandatory		Unclassified
former Name	apo	xsd:string		Optional		Protected
alternativeName	apo	xsd:string		Optional		Unclassified
thumbnail	foaf	xsd:anyURI		Optional		Protected

Conference

RDF Class:	dcterms:Event
Definition	A non-persistent, time-based occurrence.
Usage note	

Property	namespace	Datatype	Range	Obligation	Notes
ID	dcterms	xsd:anyURI		Recommended	see https://www.crossref.org/working-groups/conferences-projects/
title	dcterms	xsd:string		Mandatory	

Concept

RDF Class:	skos:Concept
Definition	A SKOS concept can be viewed as an idea or notion; a unit of thought. However, what constitutes a unit of thought is subjective, and this definition is meant to be suggestive, rather than restrictive. The notion of a SKOS concept is useful when describing the conceptual or intellectual structure of a knowledge organization system, and when referring to specific ideas or meanings established within a KOS. Note that, because SKOS is designed to be a vehicle for representing semi-formal KOS, such as thesauri and classification schemes, a certain amount of flexibility has been built in to the formal definition of this class.
Usage note	

Property	namespace	Datatype	Range includes	Obligation	Notes
inScheme	skos	xsd:anyURI	skos:conceptScheme	recommended	
topConceptOf	skos	xsd:anyURI	skos:conceptScheme	optional	
prefLabel	skos	xsd:string		mandatory	
altLabel	skos	xsd:string		optional	
broader	skos	xsd:anyURI	skos:concept	mandatory*	*mandatory when skos:topConceptOf is empty
narrower	skos	xsd:anyURI	skos:concept	optional	
related	skos	xsd:anyURI	skos:concept	optional	
scopeNote	skos	xsd:string		optional	
notation	skos	xsd:string; xsd:integer		optional*	*recommended when owl:sameAs is not empty
depiction	foaf	xsd:anyURI		optional	
sameAs	owl	xsd:anyURI	skos:concept	optional*	mandatory where the concept is the same as a concept in a different skos:conceptScheme
exactMatch	skos	xsd:anyURI	skos:concept	optional	
closeMatch	skos	xsd:anyURI	skos:concept	optional	
lat	geo	xsd:decimal		optional*	mandatory when geo:long is not empty
long	geo	xsd:decimal		optional*	mandatory when geo:lat is not empty

References

Library of Congress (2017). MARC Code List for Organizations. Retrieved from http://www.loc.gov/marc/organizations/orgshome