

ANZSRC 2020

Introduction

The ANZSRC 2020 Classification is a widely-used statistical classification for the measurement and analysis of research and development activities in Australia and New Zealand. The definitive source of information about ANZSRC 2020 is at the ABS website: [Australian and New Zealand Standard Research Classification \(ANZSRC\)](#).

ARDC publishes the ANZSRC 2020 Classification's Fields of Research and Socio-Economic Objectives in Research Vocabularies Australia in partnership with ABS. The content is made available through a variety of access formats.

NB: ABS's own description includes the statement, "The Australian and New Zealand Standard Research Classification (ANZSRC) is a set of three related classifications", thus conflating two uses of the word "classification". This page makes no attempt to resolve such an ambiguity.

Publication policy

Classifications available

The ANZSRC 2020 Classification is republished in Research Vocabularies Australia in these ways:

- The Fields of Research (FoR) Classification is available as a vocabulary here: <https://vocabs.ardc.edu.au/viewById/316>
- The Socio-Economic Objectives (SEO) Classification is available as a vocabulary here: <https://vocabs.ardc.edu.au/viewById/317>

The Type of Activity (ToA) Classification has not been made available in RVA.

Access formats

The vocabulary data of each version is available as a direct download, through a [SPARQL endpoint](#), the [Linked Data API](#), and the [Vocabulary Widget](#).

About the ANZSRC 2020 Classification: FoR and SEO

The ABS have published the ANZSRC 2020 classifications as a set of spreadsheets. ARDC has produced translations of the FoR and SEO classifications into RDF and is making them available for anyone to use. This document describes the structure and content of the RDF data. The target audience is people who will be implementing systems that consume the RDF data, for example, selection widgets and keyword resolution services.

In the following, we use the FoR classification as a working example; the translation of the SEO classification works the same way.

TL;DR

Expert users who understand SKOS and the RDF Turtle syntax may skip directly to the section "The translation into RDF" below.

Basic notions

According to the FoR classification's explanatory notes:

4. The FoR classification is a hierarchical classification with three levels: Division (2-digit), Group (4-digit) and Field (6-digit). Each level is identified by a unique number.

5. Each Division is based on a broad discipline. Groups within each Division are those which share the same broad methodology, knowledge domain and/or perspective as others in the Division. Each Group is a collection of related Fields of Research. Groups and Fields of Research are categorised to the Divisions sharing the same methodology rather than the Division they support.

(The same points are made in the explanatory notes for the SEO classification, mutatis mutandis.)

The ARDC translation treats the classification as a [Knowledge organization system](#), in particular, as a taxonomy. The classification is represented as a concept scheme, and each Division is a top concept of the concept scheme. The Groups and Fields are represented as narrower concepts; they are arranged in a hierarchy of broader and narrower terms corresponding to the relation between Divisions, Groups, and Fields in the classification. For example, the concept scheme for the FoR classification has these relations between the concepts for Division 30, Group 3001, and Field 300101:

- Division 30 (AGRICULTURAL, VETERINARY AND FOOD SCIENCES) is represented as a concept of the concept scheme. It is marked as a top concept of the concept scheme.
 - Group 3001 (Agricultural biotechnology) is represented as a concept of the concept scheme. It is marked as a narrower term of the concept for Division 30. Conversely, Division 30 is marked as a broader term of this concept.
 - Field 300101 (Agricultural biotechnology diagnostics (incl. biosensors)) is represented as a concept of the concept scheme. It is marked as a narrower term of the concept for Group 3001. Conversely, Group 3001 is marked as a broader term of this concept.

About SKOS

SKOS, the Simple Knowledge Organization System, "provides a standard way to represent knowledge organization systems using the Resource Description Framework (RDF). Encoding this information in RDF allows it to be passed between computer applications in an interoperable way." (See [Introduction to SKOS](#) for more information.)

SKOS is a popular, widely used way of representing taxonomies in RDF. ARDC's [Research Vocabularies Australia](#) service hosts many vocabularies represented in SKOS.

The FoR and SEO classifications have been translated into RDF using the classes and properties defined by the SKOS model. The following section provides the details of the translation.

The translation into RDF

Base URL

The concept scheme and all of the concepts are treated as RDF resources. Each resource is denoted using a resource identifier, which is a URL. (To be precise, it is denoted using an IRI which is also a URL; that fine distinction is irrelevant for the present purposes. See [RDF 1.1 Concepts and Abstract Syntax, IRIs](#) for detailed information about IRIs.) Because every one of those URLs begins in exactly the same way, we consider that each URL is composed of two components: a "base URL", which is exactly the same for all the URLs, and a "relative part", which differs from resource to resource. The base URL is concatenated with a relative part to give an "absolute URL".

For convenience of presentation, RDF data is presented below using [Turtle syntax](#). In particular, we define and make use of prefixes for the base URLs.

The base URLs and prefixes used for the classifications are as follows:

Classification	Prefix	Base URL
FoR	<code>anzsrc-2020-for:</code>	<code>https://linked.data.gov.au/def/anzsrc-for/2020/</code>
SEO	<code>anzsrc-2020-seo:</code>	<code>https://linked.data.gov.au/def/anzsrc-seo/2020/</code>

There is one exception to the assignment of URLs: the concept scheme of each classification is assigned a URL without the trailing slash. I.e., the URL of the FoR concept scheme is `https://linked.data.gov.au/def/anzsrc-for/2020`.

URL Resolution

The URLs of resources resolve to appropriate "landing pages" of the Linked Data API hosted at Research Vocabularies Australia. For example, try clicking this URL (which will open in a new tab/window) to see the landing page for FoR Group 4901:

<https://linked.data.gov.au/def/anzsrc-for/2020/4901>

Language tags

All literals are specified with the language tag "en", i.e., English.

RDF preliminaries

In this and the following sections, RDF data is presented using [Turtle syntax](#).

Here are the prefixes used in what follows. Note that if you download the classification in RDF format, you may find some differences in the use of the prefixes. However, the resulting RDF is exactly identical.

```
@prefix anzsrc-2020-for: <https://linked.data.gov.au/def/anzsrc-for/2020/>
.
@prefix anzsrc-2020-for-cs: <https://linked.data.gov.au/def/anzsrc-for/2020> .
@prefix dcterms: <http://purl.org/dc/terms/> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix skos: <http://www.w3.org/2004/02/skos/core#> .
```

The classification

Here is the definition of the classification as a concept scheme.

```
<https://linked.data.gov.au/def/anzsrc-for/2020> a skos:ConceptScheme;
  dcterms:title "1297.0 ANZSRC - Australian and New Zealand Standard
  Research Classification, 2020: Fields of Research (FoR)"@en;
  rdfs:label "1297.0 ANZSRC - Australian and New Zealand Standard Research
  Classification, 2020: Fields of Research (FoR)"@en;
  skos:note ""1297.0 ANZSRC - Australian and New Zealand Standard
  Research Classification, 2020
  Fields of Research (FoR)
  Released at 11.30am (Canberra time) 30 June 2020
```

Explanatory Notes

More information on the ABS website

ANZSRC - Australian and New Zealand Standard Research Classification, 2020
Summary (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/1297.0>)

... the rest of the content omitted ...

© Commonwealth of Australia 2020 (<http://www.abs.gov.au/websitedbs/d3310114.nsf/Home/%C2%A9+Copyright?OpenDocument>)

© Crown Copyright New Zealand 2020 (http://www.stats.govt.nz/about_us/about-this-site/copyright-terms-of-use.aspx) ""@en ;

skos:hasTopConcept anzsrc-2020-for:30 ;

skos:hasTopConcept anzsrc-2020-for:31 ;

skos:hasTopConcept anzsrc-2020-for:32 ;

etc. etc.

skos:hasTopConcept anzsrc-2020-for:52 ;

.

The Divisions

Here is an example of the definition of a division:

```
anzsrc-2020-for:30 a skos:Concept;
  skos:definition ""This division covers the sciences and technologies
```

supporting agriculture.

It includes:

- crop and pasture production;
- agronomy;
- horticultural production;
- animal production;
- forestry sciences;
- fisheries sciences;
- food sciences; and,
- veterinary sciences."

```
skos:inScheme anzsrc-2020-for-cs: ;
skos:narrower anzsrc-2020-for:3001;
skos:narrowerTransitive anzsrc-2020-for:3001, anzsrc-2020-for:300101,
anzsrc-2020-for:300102,
    anzsrc-2020-for:300103, anzsrc-2020-for:300104, anzsrc-2020-for:
300105, anzsrc-2020-for:300106,
    anzsrc-2020-for:300107, anzsrc-2020-for:300108, anzsrc-2020-for:300109;
skos:notation "30"@en;
skos:narrowerTransitive anzsrc-2020-for:300110;
skos:prefLabel "AGRICULTURAL, VETERINARY AND FOOD SCIENCES"@en;
skos:scopeNote "a) Indigenous agricultural, veterinary and food sciences
is included in Division 45 Indigenous studies."@en;
skos:topConceptOf anzsrc-2020-for-cs: .
```

The Groups

Here is an example of the definition of a group:

```
anzsrc-2020-for:3001 a skos:Concept;
skos:broader anzsrc-2020-for:30;
skos:broaderTransitive anzsrc-2020-for:30;
skos:definition "This group covers agricultural biotechnology."@en;
skos:inScheme anzsrc-2020-for-cs: ;
skos:narrower anzsrc-2020-for:300101, anzsrc-2020-for:300102, anzsrc-
2020-for:300103,
    anzsrc-2020-for:300104, anzsrc-2020-for:300105, anzsrc-2020-for:
300106, anzsrc-2020-for:300107,
    anzsrc-2020-for:300108, anzsrc-2020-for:300109, anzsrc-2020-for:
300110, anzsrc-2020-for:300199;
skos:narrowerTransitive anzsrc-2020-for:300101, anzsrc-2020-for:300102,
anzsrc-2020-for:300103,
    anzsrc-2020-for:300104, anzsrc-2020-for:300105, anzsrc-2020-for:
300106, anzsrc-2020-for:300107,
    anzsrc-2020-for:300108, anzsrc-2020-for:300109, anzsrc-2020-for:
300110, anzsrc-2020-for:300199;
skos:notation "3001"@en;
skos:prefLabel "Agricultural biotechnology"@en;
skos:scopeNote ""a) Improvement of plants through selective breeding is
included in Group 3004 Crop and pasture production and Group 3007 Forestry
sciences and Group 3008 Horticultural prod
uction.
```

- b) Improvement of animals through selective breeding is included in Group 3003 Animal production.
- b) Genetic modification of plants, microbes or animals for environmental purposes and biological control of pests, diseases and exotic species is included in Group 4103 Environmental biotechnology.
- c) Genetic modification of plants, microbes or animals for industrial purposes (other than agriculture) is included in Group 3106 Industrial biotechnology.
- d) Genetic modification of plants, microbes or animals for medical purposes is included in Group 3206 Medical biotechnology.
- e) Nanobiotechnology is included in Group 3106 Industrial biotechnology and medical biotechnology is included in Group 1119 Nanotechnology health.
- f) Ethical use of biotechnology is included in Group 5001 Applied ethics." "@en .

The Fields

Here is an example of the definition of a field:

```
anzsrc-2020-for:300101 a skos:Concept;  
  skos:broader anzsrc-2020-for:3001;  
  skos:broaderTransitive anzsrc-2020-for:30, anzsrc-2020-for:3001;  
  skos:inScheme anzsrc-2020-for-cs: ;  
  skos:notation "300101"@en;  
  skos:prefLabel "Agricultural biotechnology diagnostics (incl.  
  biosensors)"@en .
```

For more information

- ABS information about the ANZSRC 2020 Classification: [Australian and New Zealand Standard Research Classification \(ANZSRC\)](#).
- Please contact services@ardc.edu.au if you have any suggestions for improvement of the support within Research Vocabularies Australia for the ANZSRC 2020 Classifications, or if you have questions about the service.