Technical Guideline Series

Contents

The IPBES Ontology

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Abstract

The ontology developed for representing intergovernmental reports and the broad topics and information that they cover.

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1. Introduction

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is the intergovernmental body which assesses the state of biodiversity and of the ecosystem services it provides to society, in response to requests from decision makers. To this end, it produces regular regional, national and global assessment reports in collaborations with many experts, scientists and politicians from a wide range of expertise, nationalities and backgrounds. To our knowledge, there is no existing ontology for representation of intergovernmental reports and the broad topics and information that they cover. To this end, we have created the IPBES ontology as the stepping stone for representing these types of data as LOD and make them accessible for further exploration.

2. Namespace Declarations

This is the list of the namesspaces used in this ontology.

namespace prefix	namespace URI
ipbes	https://ontology.ipbes.net/report/
foaf	http://xmlns.com/foaf/0.1/
skos	http://www.w3.org/2004/02/skos/core#

3. The IPBES Ontology Description

The classes and properties used in IPBES ontology are created on the fly based on the information that we encounter and the concepts that we aimed to represent. However, the usage of the properties is consistent and the coined URI's are stable and unique. Currently our ontology consists of 6 classes, each representing a specific part of the data along with their corresponding attributes.

4. Classes and Attributes

Classes									
Report	Chapter	SubChapter	KeyMessage	BackgroundMessage	SubMessage	Illustration	Reference	KnowledgeGap	Person

Report

Class	
ipbes.Report	http://ontology.ipbes.net/report

Properties	
skos:prefLabel	The label that is preferred to be used for a chapter, sub-chapter, report or person
Skos:altLabel	Alternative writing format or language of the preferred label
ipbes:year	The publication year
ipbes:hasDoi	The DOI number

Chapter

Class	
ipbes.Chapter	http://ontology.ipbes.net/data/ch/

Properties	
skos:prefLabel	The label that is preferred to be used for a chapter, sub-chapter, report or person
ipbes:Report	Link to the class Report of the chapter
ipbes:hasDoi	The DOI number
ipbes:identifier	The identifier of the chapter or sub-chapter or key message in the report
foaf.Person	The list of persons who have a role in this chapter

Sub-chapter

Class	
ipbes.SubChapter	http://ontology.ipbes.net/report/sch/

Properties	
ipbes:identifier	The identifier of the chapter or sub-chapter or key message in the report
ipbes:Chapter	Link to the class Chapter of the sub-chapter
ipbes:Report	Link to the class Report of the sub-chapter
ipbes:KeyMessage	Link to the class KeyMessage for which the sub-chapter has been referred to
ipbes:Reference	Link to the class reference for the citations used in each subchapter
skos:prefLabel	The label that is preferred to be used for a chapter, sub-chapter , report or person
ipbes:hasDescription	The text that further describes the content

Key message

Class	
ipbes.KeyMessage	http://ontology.ipbes.net/report/key/

Properties	
ipbes:BackgroundMessage	Link to the class BackgroundMessage which the key message has been referred to
ipbes:identifier	The identifier of the chapter or sub-chapter or key message in the report
ipbes:Report	Link to the class Report of the key message

Properties	
skos:prefLabel	The label that is preferred to be used for a chapter, sub-chapter, report or person
ipbes:hasDescription	The text that further describes the content
ipbes:hasEstablishedIncomplete	Level of confidence
ipbes:hasWellestablished	Level of confidence
ipbes:hasUnresolved	Level of confidence
ipbes:hasInconclusive	Level of confidence

Background message

Class	
ipbes.BackgroundMessage	http://ontology.ipbes.net/report/bgm/

Properties	
ipbes:SubMessage	Link to the sub-messages used in each background message
ipbes:identifier	The identifier of the chapter or sub-chapter or key message in the report
ipbes:Report	Link to the class Report of the key message
skos:prefLabel	The label that is preferred to be used for a chapter, sub-chapter, report or person
ipbes:hasDescription	The text that further describes the content
ipbes:hasEstablishedIncomplete	Level of confidence
ipbes:hasWellestablished	Level of confidence
ipbes:hasUnresolved	Level of confidence
ipbes:hasInconclusive	Level of confidence

Sub-message

Class	
ipbes.SubMessage	http://ontology.ipbes.net/report/subm/

Properties	
ipbes:identifier	The identifier of the chapter or sub-chapter or key message in the report
ipbes:hasDescription	The text that further describes the content
ipbes:SubChapter	Link to class SubChapter. Use for subchapters mentioned in the sub-message
ipbes:Illustration	Link to class Illustration. Used for mentioned tables, figures or boxes in the sub-message
ipbes:hasEstablishedIncomplete	Level of confidence
ipbes:hasWellestablished	Level of confidence
ipbes:hasUnresolved	Level of confidence
ipbes:hasInconclusive	Level of confidence

Illustration

Class	
ipbes.Illustration	http://ontology.ipbes.net/report/il/

Properties	
ipbes:identifier	The identifier of the chapter or sub-chapter or key message in the report
skos:prefLabel	The label that is preferred to be used for a chapter, sub-chapter, report or person
ipbes:hasDescription	The text that further describes the content
ipbes:hasDoi	The DOI number
owl:sameAs	Link to other resources such as the zotero repository of the reference

Reference

Class	
ipbes.Reference	http://ontology.ipbes.net/report/ref/

Properties	
ipbes:Chapter	Link to the class Chapter in which the reference has been used
ipbes:Report	Link to the class Report
ipbes:SubChapter	Link to the class SubChapter in which the reference has been used
owl:sameAs	Link to other resources such as the zotero repository of the reference
ipbes:hasDescription	The text that further describes the content
ipbes:hasDoi	The DOI number

KnowledgeGap

Class	
ipbes.KnowledgeGap	http://ontology.ipbes.net/report/kg/

Properties	
ipbes:Report	Link to the class Report
ipbes:SubChapter	Link to the class SubChapter in which the knowledge gap was described
ipbes:hasDescription	The text that further describes each knowledge gap that is related to the subchapters mentioned in the text

Properties	
ipbes:identifier	The identifier of the sub-chapter or illustration mentioned in description

Person

Class	
foaf.Person	http://ontology.ipbes.net/report/person/

Properties	
foaf:firstName	First name of the person
foaf:lastName	Family name of the person
ipbes:Chapter	Link to the class Chapter in which the person has a role
ipbes:Report	Link to the class Report
skos:prefLabel	The label that is preferred to be used for a chapter, sub-chapter, report or person
owl:sameAs	Link to other resources about the person, such as ORCID
ipbes:country	Country of residence of the person
ipbes:ca	Contributing authors in the stated chapter and report
ipbes:cl	Coordinating lead authors in the stated chapter and report
ipbes:fl	Fellows in the stated chapter and report
ipbes:cs	Co-chairs in the stated chapter and report
ipbes:la	Lead authors in the stated chapter and report
ipbes:re	Review editors in the stated chapter and report

5. References

https://www.w3.org/2009/08/skos-reference/skos.html

http://xmlns.com/foaf/0.1/