Indigo Platform Documentation

Release 3.0.0

AfricanLII

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Contents

Indigo is AfricanLII's document management system for managing, capturing and publishing legislation in the Akoma Ntoso format, built and maintained by Laws.Africa with a grant from Indigo Trust.

Visit our GitHub repository to find out how you can contribute to the project.

The Indigo platform is a Django python web application with three components:

- a web application for managing and editing documents
- a **read-only REST API** for vending published legislative documents in HTML and XML

The main REST API supports the creation, editing and management of a library of legislative documents. The public read-only API provides access to published documents in XML, HTML or other formats.

CHAPTER 1

Contents

1.1 Installing and Running Indigo

This guide is for developers who want to install and run their own instance of the Indigo platform.

Indigo is a Django web application that can be run as a standalone project, or as part of an existing Django project. This guide will explain how to run Indigo as a standalone project.

1.1.1 Requirements

Indigo requires:

- Python 2.7
- PostgreSQL 9.3+
- Ruby 2.1.6+ for Slaw
- An AWS S3 account and bucket for storing attachments

Optional but useful:

- An SMTP server to send email through, or an appropriate service

Using Heroku/Dokku means that we're using well-document and widely understood mechanisms for specifying dependencies and configuration across multiple languages. It takes care of all this for you and we highly recommend using them.

1.1.2 Installing Indigo Locally

1. Ensure you have Python 2.7 and virtualenv installed
2. Clone the github.com/laws-africa/example-indigo repository. It has all Indigo's dependencies for Python and Ruby described in it:

```
$ git clone https://github.com/laws-africa/example-indigo
$ cd indigo
```

3. Setup and activate the virtual environment:

```
$ virtualenv --no-site-packages --python=python2 env
$ source env/bin/activate
```

4. Install Python dependencies:

```
$ pip install -r requirements.txt
```

5. Ensure you have PostgreSQL installed and running. Create a postgresql user with username and password *indigo*, and create a corresponding database called *indigo*:

```
$ sudo su - postgres -c 'createuser -d -P indigo'
$ sudo su - postgres -c 'createdb indigo'
```

6. Run the Django database migrations to setup the initial database:

```
$ python manage.py migrate
$ python manage.py update_countries_plus
```

7. Then create the superuser:

```
$ python manage.py createsuperuser
```

8. Finally, run the server:

```
$ python manage.py runserver
```

9. Visit the website to login: http://localhost:8000/
10. Configure a country:

- Visit http://localhost:8000/admin
- Under **Indigo API** click Countries, then click Add Country in the top right corner
- Choose a country and primary language from the dropdown lists
- Click Save

11. Now go back to http://localhost:8000/ and your country will be included in the list.

Ruby dependencies

You won't be able to import documents yet. First, you'll need to install Ruby and the Slaw parser library. We strongly recommend installing and using RVM or a similar Ruby version manager. You'll need at least Ruby version 2.3.

Once you've install Ruby, install Bundler and the Indigo dependencies:

```
$ gem install bundler
$ bundle install
```

You can test that Slaw is installed with slaw –version:

```
$ slaw --version
slaw 1.0.4
```

Django Customisation

You can now easily change Django settings, add your own modules, change URLs, etc. You simply need to create your own settings file, import the settings from Indigo, and update *manage.py* to reference your new settings file. For example:

1. Create a python module folder *my_app*:

```
$ mkdir my_app; touch my_app/__init__.py
```

2. Create *my_app/settings.py* so that it looks like this:

```
from indigo.settings import *

# override any Django settings, as you would normally.

# add your own apps, eg:
# INSTALLED_APPS = ('my_app',) + INSTALLED_APPS

# add your own URLs
# ROOT_URLCONF = 'my_app.urls'

# etc.
```

3. Update *manage.py* so that it references your new *my_app.settings* file:

```
#!/usr/bin/env python
import os
import sys

if __name__ == "__main__":
    os.environ.setdefault("DJANGO_SETTINGS_MODULE", "my_app.settings")

    from django.core.management import execute_from_command_line

    execute_from_command_line(sys.argv)
```

4. Run your updated app with `python manage.py runserver`

1.1.3 Production Installation

Indigo requires some non-Python dependencies. This guide explains how to deploy Indigo and these dependencies on Heroku or Dokku. Dokku uses Docker to emulate a Heroku-like environment on your own servers (or cloud).

Note: We don't recommend using Heroku for production because some Indigo functionality – such as parsing new documents – can take longer than the 30 seconds Heroku allows for web API calls. However, Heroku is great for quickly trying Indigo out.

Installation on Heroku and Dokku are similar and only really differ in the commands that are run. We describe using Dokku below, and assume that you have already have Dokku installed.

1. Ensure you have PostgreSQL installed and running. Create a postgresql user with username *indigo*, and create a corresponding database called *indigo*. For example:

```
$ sudo su - postgres -c 'createuser -d -P indigo'
$ sudo su - postgres -c 'createdb indigo'
```

2. Create a new Dokku application:

```
$ dokku apps:create indigo
```

3. (optional) Create a new AWS S3 account and bucket for storing attachments. You'll need the AWS Access Key Id and AWS Secret Access Key in the next step. You can safely skip this step if you don't care about saving attachments just yet.

4. Set config options as follows (ensure you enter your correct database and AWS settings):

```
$ dokku config:set indigo \
    DATABASE_URL=postgres://indigo:DATABASE-PASSWORD@DATABASE-HOST/indigo \
    DISABLE_COLLECTSTATIC=1 \
    DJANGO_DEBUG=false \
    DJANGO_SECRET_KEY=some random characters \
    AWS_ACCESS_KEY_ID=aws access key \
    AWS_SECRET_ACCESS_KEY=aws secret access key \
    AWS_S3_BUCKET=your-bucket-name
```

5. Deploying requires using *git push* to push to dokku. So you'll need to add *dokku* as a git remote on your local host. If you have cloned the *example-indigo* repo from above, you can do this:

```
$ git remote add dokku dokku@DOKKU-HOSTNAME:indigo
```

6. Now deploy to dokku using *git push dokku*. This is how you deploy any and all updates:

```
$ git push dokku
```

7. Create the an admin user by running this command **on the Dokku server**:

```
$ dokku run indigo python manage.py createsuperuser
```

8. Visit your new Indigo app in your browser at https://your-dokku-host.example.com

9. Configure a country:

    - Visit *https://your-dokku-host.example.com/admin*
    - Under **Indigo API** click Countries, then click Add Country in the top right corner
    - Choose a country and primary language from the dropdown lists
    - Click Save

1.1.4 Background Tasks

Indigo can optionally do some operations in the background. It requires a worker or cron job to run the `django-background-tasks` task queue. Indigo tasks are placed in the `indigo` task queue. See *django-background-tasks <https://django-background-tasks.readthedocs.io/en/latest/>* for more details on running background tasks.

To enable background tasks, set `INDIGO.NOTIFICATION_EMAILS_BACKGROUND` to True.

1.2 Configuration

Config options are mostly passed to Indigo as environment variables. These are the options you can set:

- `AWS_ACCESS_KEY_ID`

  Required for production. The AWS access key ID for the account with write-access to the S3 bucket used for storing attachments.

- `AWS_SECRET_ACCESS_KEY`

  Required for production. The AWS secret access key for the account with write-access to the S3 bucket used for storing attachments.

- `AWS_S3_BUCKET`

  Required for production. The name of the S3 bucket for storing attachments.

- `AWS_S3_HOST`

  The regional S3 endpoint to use. Optional. Default: `s3-eu-west-1.amazonaws.com`

- `DATABASE_URL`

  Required. The URL of the database to use

- `DJANGO_DEBUG`

  The Django `DEBUG` setting. Everything other than `true` means False. This should always be `false` in production. Default: `true`

- `DJANGO_DEFAULT_FROM_EMAIL`

  The Django `DEFAULT_FROM_EMAIL` setting: who do emails come from? Uses `SUPPORT_EMAIL` by default.

- `DJANGO_EMAIL_HOST`

  The Django `EMAIL_HOST` setting. The SMTP host through which to send user emails such as password resets.

- `DJANGO_EMAIL_HOST_PASSWORD`

  The Django `EMAIL_HOST_PASSWORD` setting. The SMTP password.

- `DJANGO_EMAIL_HOST_PORT`

  The Django `EMAIL_HOST_PORT` setting. The SMTP port (default: 25).

- `DJANGO_EMAIL_HOST_USER`

  The Django `EMAIL_HOST_USER` setting. The SMTP username.

- `DJANGO_SECRET_KEY`

  Required if DJANGO_DEBUG is not true. The Django `SECRET_KEY` setting. In production you should use a random (and secret) string.

- `GOOGLE_ANALYTICS_ID`

  Google Analytics ID for website tracking. Only used when `DEBUG` is False.

- `SUPPORT_EMAIL`

  Required Email address users can email for help.

- `INDIGO.EMAIL_FAIL_SILENTLY`

  Should email sending fail silently?

- `INDIGO.GSHEETS_API_CREDS`

  JSON of Google Sheets API credentials token details, if you want Indigo to be able to talk to Google Sheets directly. Otherwise, Indigo will use CSV export and the Google Sheet will need to be publicly accessible.

For details on setting up Google Sheets for API access, see https://medium.com/@denisluiz/python-with-google-sheets-service-account-step-by-step-8f74c26ed28e

- `INDIGO.NOTIFICATION_EMAILS_BACKGROUND`

  Should notification emails be sent asynchronously in the background? Default is False. See django-background-tasks documentation.

1.2.1 Authentication

Indigo uses django-allauth for user authentication and social accounts, configuration is as per the django-allauth documentation.

Social Accounts

By default, Indigo doesn't have any social account authentication enabled. To enable a social provider, follow the documentation for django-allauth. Namely, you'll need to:

1. Include the account provider in *INSTALLED_APPS*:

   INSTALLED_APPS = INSTALLED_APPS + ('allauth.socialaccount.providers.google',)

2. Get the appropriate client and secret keys from the provider, and create a social app in the admin interface.

1.3 Using the Indigo Platform

Welcome to the guide to using the Indigo platform to manage and maintain a collection of legislation documents. This guide is for law librarians and others who are familiar with writing legislation documents and want to know how to use the Indigo Platform.

Note: Indigo cannot be used with Internet Explorer. You must use Chrome, Firefox, Safari or Edge.

Note: Throughout this guide we refer to **documents**. These are generally legislative Acts but may also be related legislative documents such as regulations or by-laws.

Contents:

1.3.1 Managing Your Account

Logging In

You need to log into your Indigo account to import and edit documents. You may be able to view documents without logging in.

To log in, click the **Log in** button in the top-right corner, enter your email address and password, and click the **Log in** button.

Creating an account

New accounts must be created manually. Please email the address in the login window to get an account.

Note: Administrators: visit `/admin/auth/user/` on your indigo instance to create a new account. Always use an email address for the username.

Resetting your password

You can reset your password if you've forgotten it.

1. Click the **Log in** button in the top-right corner.
2. Click **I forgot my password**.
3. Fill in the email address you use for your account.
4. Click **Reset password**.
5. Indigo will send you an email with a link to reset your password. Click the link in the email and follow the prompts to change your password.
6. Go back to the login page, click **Log in**, enter your email address and your new password, and click **Log in**.

Changing your name or email address

You can change your profile details after you've logged in.

1. Click your button with your name or email in the top-right corner.
2. Click the **Profile** menu item.
3. Update your details.
4. Click **Save changes**.

Changing your password

You can change your password after you've logged in.

1. Click your button with your name or email in the top-right corner.
2. Click the **Profile** menu item.
3. Click **Change your password**.
4. Enter your new password twice to confirm it.
5. Click **Change password**.

Logging out

You don't need to log out.

If you need to log out,

1. Click your button with your name or email in the top-right corner.
2. Click **Log out**.

1.3.2 Indigo Principles

The Indigo platform works a bit differently to other consolidation platforms you might be familiar with. Understanding these differences will help make explain why the Indigo platform doesn't look like a text editor such as Microsoft Word.

Structure, Content and Presentation

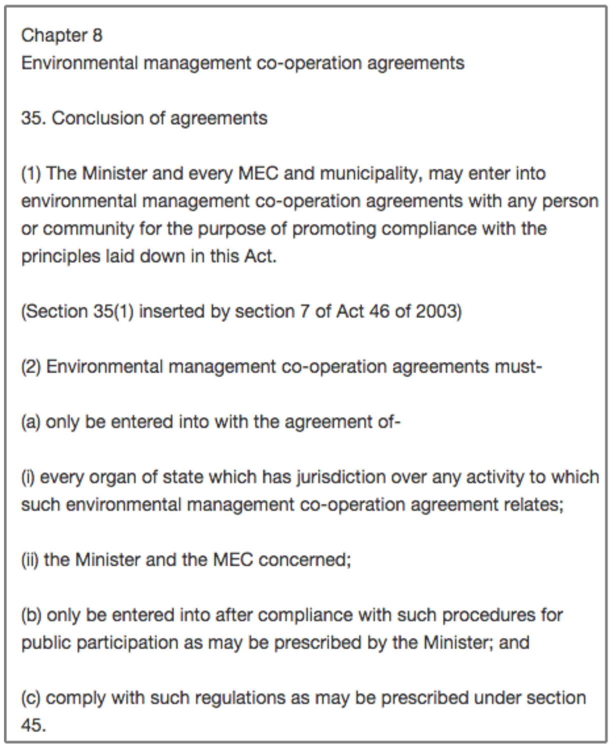
A key goal of the Indigo platform is to allow content to be published for a wide variety of media and devices, including print, desktop web browsers, mobile phones and others that we don't yet know of. It's important that a document can be formatted appropriately for each medium. For example, a printed document will include the Table of Contents at the start of the document, while a web browser and a mobile phone will display the Table of Contents differently to help users navigate the document effectively.

To achieve this, the platform must capture the **metadata**, **content** and **structure** of the document separately from its **presentation**.

- **Metadata** describes the document as a piece of work and includes information such as its title, publication date, language and country. This data allows users to classify, browse and search for documents and is also used when presenting the document.
- **Structure** is the heirarchy of the document, including chapter, part and section information. Capturing the structure makes it possible to provide intuitive user experiences, such as an interface for browsing through a document by section or linking between different sections of a document or between documents.
- **Content** is the actual words of the document, including headings, tables and paragraph numbers, and forms the core of the document.
- **Presentation** is how the document is physically presented to the user and includes typography, layout, colour and formatting.

Note: Notice that presentation is separate from structure and comes *last* in the logical pipeline of managing a document. The same metadata, content and structure can be presented in many different ways.

Here is an example piece of legislation that illustrates the difference between content, structure and presentation.



Chapter 8
Environmental management co-operation agreements

35. Conclusion of agreements

(1) The Minister and every MEC and municipality, may enter into environmental management co-operation agreements with any person or community for the purpose of promoting compliance with the principles laid down in this Act.

(Section 35(1) inserted by section 7 of Act 46 of 2003)

(2) Environmental management co-operation agreements must-

(a) only be entered into with the agreement of-

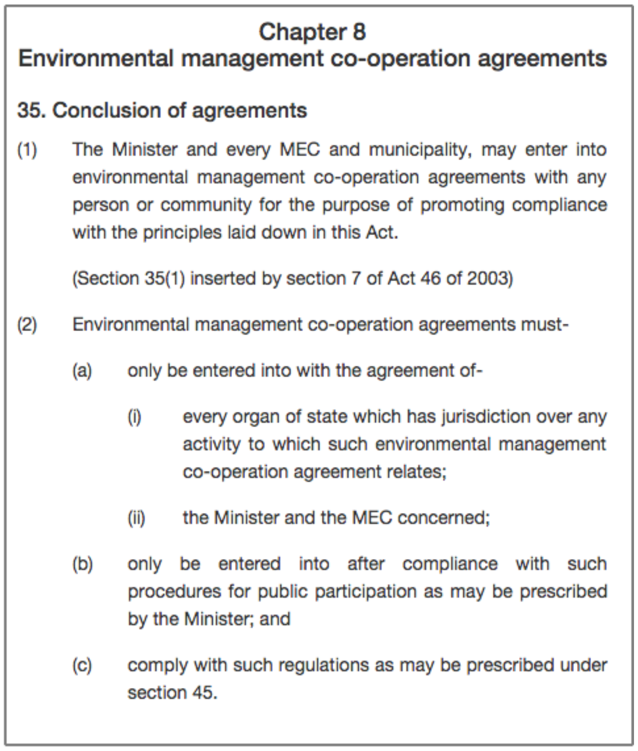
(i) every organ of state which has jurisdiction over any activity to which such environmental management co-operation agreement relates;

(ii) the Minister and the MEC concerned;

(b) only be entered into after compliance with such procedures for public participation as may be prescribed by the Minister; and

(c) comply with such regulations as may be prescribed under section 45.

Content without structure
with simple presentation



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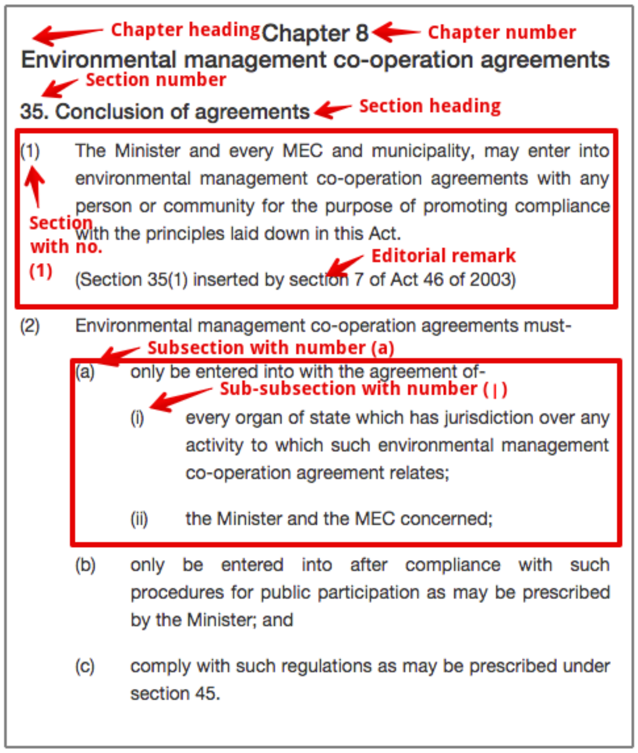
Content with presentation
based on structure



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Structure of content

The Indigo platform focuses on capturing the metadata, structure and content of documents. It provides some support for basic presentation of a document–primarily HTML–and allows others to build on the captured structure to provide new presentation layers. This means the hard work done to capture a document in Indigo will keep paying off over time as the support for the underlying data format grows.

Note: It's more important to capture the **content** and **structure** of a document than exactly match the presentation of the original.

A good example of this separation of content, structure and presentation is the guide you're reading right now. You can read this guide in at least four different forms, each with its own style of presentation:

- As a website
- As a PDF
- As a single downloadable webpage
- As an Epub e-book

This is all possible because the guide is written using reStructured Text, a simple text format for writing documentation that focuses on content and structure and ignores presentation. Here's what the reStructured Text source for this section looks like::

```
Structure, Content and Presentation
-----------------------------------

A key goal of the Indigo platform is to allow content to be published for a wide␣
↪variety of media and devices, including print, desktop web browsers, mobile phones␣
↪and others that we don't yet know of. It's important that a document can be␣
↪formatted appropriately for each medium. For example, a printed document will␣
↪include the Table of Contents at the start of the document, while a web browser and␣
↪a mobile phone will display the Table of Contents differently to help users␣
↪navigate the document effectively.

To achieve this, the platform must capture the **metadata**, **content** and␣
↪**structure** of the document separately from its **presentation**.

- **Metadata** describes the document as a piece of work and includes information␣
↪such as its title, publication date, language and country. This data allows users␣
↪to classify, browse and search for documents and is also used when presenting the␣
↪document.
- **Structure** is the heirarchy of the document, including chapter, part and section␣
↪information. Capturing the structure makes it possible to provide intuitive user␣
↪experiences, such as an interface for browsing through a document by section or␣
↪linking between different sections of a document or between documents.
- **Content** is the actual words of the document, including headings, tables and␣
↪paragraph numbers, and forms the core of the document.
- **Presentation** is how the document is physically presented to the user and␣
↪includes typography, layout, colour and formatting.

.. note::

    Notice that presentation is separate from structure and comes *last* in the␣
↪logical pipeline of managing a document. The same metadata, content and structure␣
↪can be presented in many different ways.

Here is an example piece of legislation that illustrates the difference between␣
↪content, structure and presentation.

.. image:: content-vs-structure.png
```

A **compiler** converts this plain text into the different formats listed above, presenting it in the best way for each format. As the author, all I need to do is ensure the content and the structure are well expressed in the reStructured Text format, and the compiler does all the hard work to make it look good. I don't need to worry about styling the document at all.

See also:

You can see the full reStructuredText source for this guide at https://github.com/Code4SA/indigo/tree/master/docs.

Akoma Ntoso

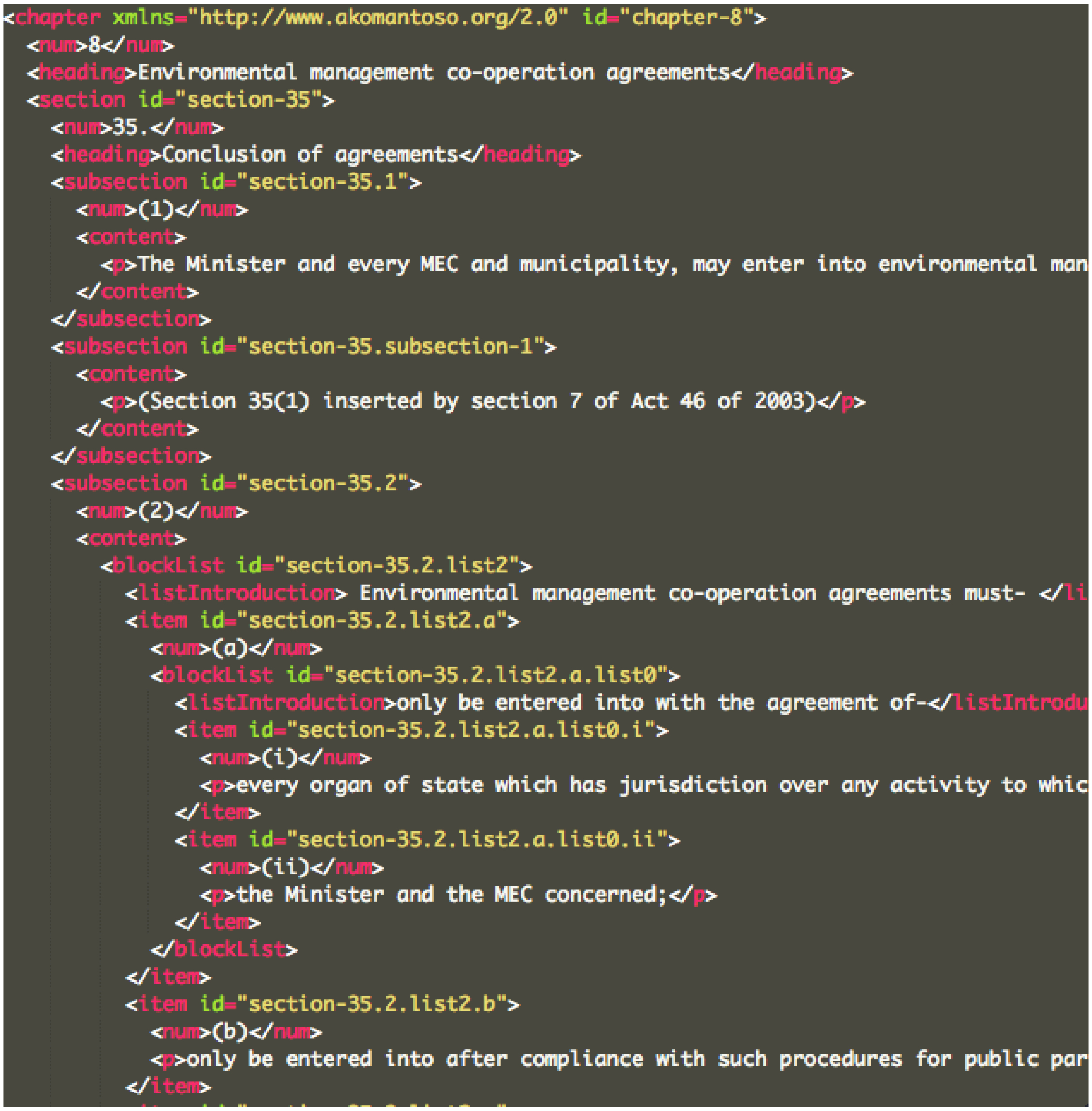
Under the hood, Indigo uses the Akoma Ntoso standard for legal documents. This is an XML standard that allows us to capture the content and–most importantly–the structure of the document. Akoma Ntoso supports a wide range of documents (acts, bills, debates, gazettes, etc.) but we only use the **act** document type. Documents such as by-laws, statutory instruments and government notices also fall under this type.

See also:

See http://www.akomantoso.org/ for more background on Akoma Ntoso.

Akoma Ntoso is designed to support the many varying structures of legislative documents used throughout the world. As a result, the format is rich and expressive but quite complicated. Indigo works with only a subset of what is allowed by Akoma Ntoso and does its best to hide this complexity from the user.

It can be useful to understand what Akoma Ntoso looks like. Here is the XML that corresponds with the content and structure from above:



```
<chapter xmlns="http://www.akomantoso.org/2.0" id="chapter-8">
  <num>8</num>
  <heading>Environmental management co-operation agreements</heading>
  <section id="section-35">
    <num>35.</num>
    <heading>Conclusion of agreements</heading>
    <subsection id="section-35.1">
      <num>(1)</num>
      <content>
        <p>The Minister and every MEC and municipality, may enter into environmental man
      </content>
    </subsection>
    <subsection id="section-35.subsection-1">
      <content>
        <p>(Section 35(1) inserted by section 7 of Act 46 of 2003)</p>
      </content>
    </subsection>
    <subsection id="section-35.2">
      <num>(2)</num>
      <content>
        <blockList id="section-35.2.list2">
          <listIntroduction> Environmental management co-operation agreements must- </li
          <item id="section-35.2.list2.a">
            <num>(a)</num>
            <blockList id="section-35.2.list2.a.list0">
              <listIntroduction>only be entered into with the agreement of-</listIntrodu
              <item id="section-35.2.list2.a.list0.i">
                <num>(i)</num>
                <p>every organ of state which has jurisdiction over any activity to whic
              </item>
              <item id="section-35.2.list2.a.list0.ii">
                <num>(ii)</num>
                <p>the Minister and the MEC concerned;</p>
              </item>
            </blockList>
          </item>
          <item id="section-35.2.list2.b">
            <num>(b)</num>
            <p>only be entered into after compliance with such procedures for public par
          </item>
```

As you can see, the Akoma Ntoso XML for a section is complicated! If you understand the format you can edit the XML directly, otherwise we recommend you use the editor.

What Indigo Does for You

Indigo automates some parts of managing legislation. It can do this because it understands the structure of the document.

1. Indigo generates the cover page for a document based on the metadata you supply. You must not include a cover page in the content of the document.
2. Indigo generates a full Table of Contents with Parts, Chapters, Sections and Schedules. You must not add a Table of Contents to you document; it's important that you don't so that Indigo doesn't get confused.

3. Indigo manages typefaces and font sizes for you. This is a presentation issue and is therefore dependent on what device or media the document is being targeted at. Indigo uses the structural information you provide to decide how the document should look on different devices.
4. Indigo handles indentation for you, based on the document structure. It knows when a subsection is a child of a section and will sort out the indentation appropriately, you don't need to worry. In fact, Indigo completely ignores tabs and spaces when it imports documents.

Next, we'll take you through how to use the Indigo platform to manage and capture legislation.

1.3.3 Works and the Library

A work is an Act, a by-law, a regulation, and so on. In Indigo, a work doesn't have any content – it's just a description of the basic details of the act (or by-law, etc.). A work can be associated with many documents, each of which is an *expression* of the work.

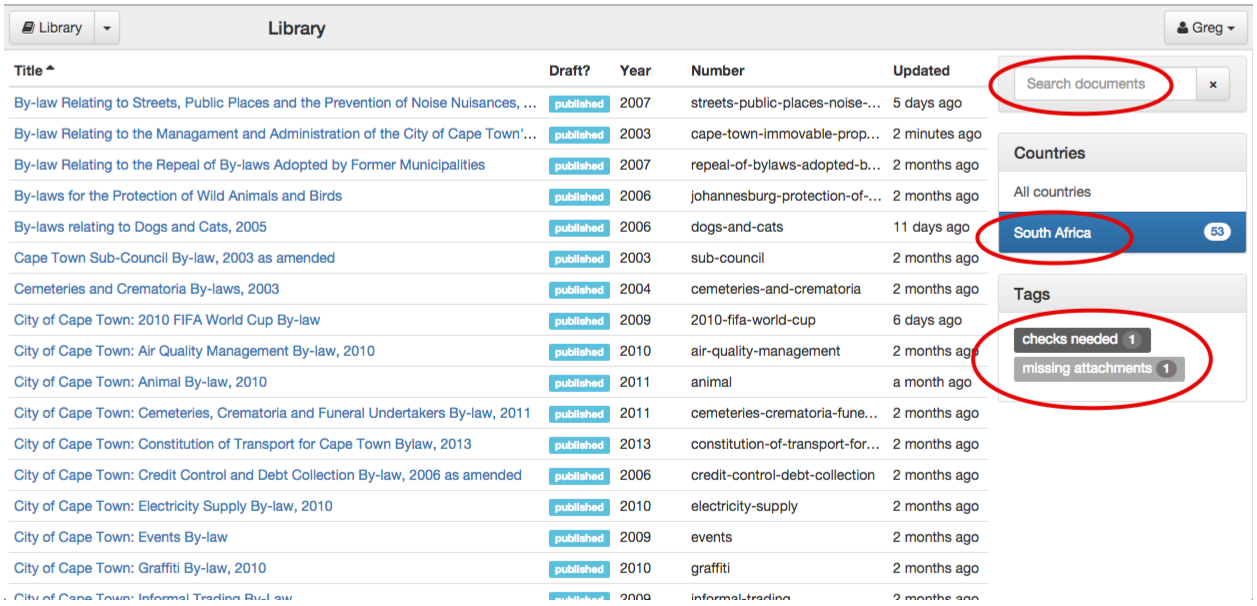
An Indigo work is uniquely identified by its FRBR URI. Documents are linked to a work through a common FRBR URI.

Documents inherit a number of fields from a work, such as the FRBR URI, publication date, repeal status, etc. These details are managed at the work level, not at the document level.

You must create a work before you can import a new document.

Library

The library lists all the works and documents in the system. You can filter them by country and by tag and search for them by title, year and number.



Title	Draft?	Year	Number	Updated
By-law Relating to Streets, Public Places and the Prevention of Noise Nuisances, ...	published	2007	streets-public-places-noise-...	5 days ago
By-law Relating to the Managament and Administration of the City of Cape Town'...	published	2003	cape-town-immovable-prop...	2 minutes ago
By-law Relating to the Repeal of By-laws Adopted by Former Municipalities	published	2007	repeal-of-bylaws-adopted-b...	2 months ago
By-laws for the Protection of Wild Animals and Birds	published	2006	johannesburg-protection-of-...	2 months ago
By-laws relating to Dogs and Cats, 2005	published	2006	dogs-and-cats	11 days ago
Cape Town Sub-Council By-law, 2003 as amended	published	2003	sub-council	2 months ago
Cemeteries and Crematoria By-laws, 2003	published	2004	cemeteries-and-crematoria	2 months ago
City of Cape Town: 2010 FIFA World Cup By-law	published	2009	2010-fifa-world-cup	6 days ago
City of Cape Town: Air Quality Management By-law, 2010	published	2010	air-quality-management	2 months ago
City of Cape Town: Animal By-law, 2010	published	2011	animal	a month ago
City of Cape Town: Cemeteries, Crematoria and Funeral Undertakers By-law, 2011	published	2011	cemeteries-crematoria-fune...	2 months ago
City of Cape Town: Constitution of Transport for Cape Town Bylaw, 2013	published	2013	constitution-of-transport-for...	2 months ago
City of Cape Town: Credit Control and Debt Collection By-law, 2006 as amended	published	2006	credit-control-debt-collection	2 months ago
City of Cape Town: Electricity Supply By-law, 2010	published	2010	electricity-supply	2 months ago
City of Cape Town: Events By-law	published	2009	events	2 months ago
City of Cape Town: Graffiti By-law, 2010	published	2010	graffiti	2 months ago
City of Cape Town: Informal Trading By-Law	published	2009	informal-trading	2 months ago

Searching

Search for a document by typing in the search box. This will limit the documents to only those that match your search. Searches ignore case and match against title, year and number. Clear the search by clicking the **x** button.

Filtering by Country

To show only documents for a particular country, choose the name of the country from the list.

Filtering by Tag

Tags are a powerful way to group and manage documents however you need to. You can add as many tags as you like to a document.

Change a document's tags by clicking on the document name and changing them in the **Basic details** section of the Properties page.

You can filter the documents to show only those with one or more tags. To do so, click the tag in the list of tags on the right. The number next to the tag is the number of documents that have that tag. Tags you are filtering by are highlighted in blue.

If you choose to filter by multiple tags, only documents with all of the chosen tags will be shown.

Editing Works

To edit a work, click through to the work from the library or a linked document.

To create a new work, use the **New Work** option in the library menu.

Work Details

Short title is the generally used title of the work. Most pieces of legislation declare what the short title will be.

Country the country that this legislation is applicable to.

Locality (optional) the area within the country that this legislation applies to. This is not applicable for national legislation and can be left blank. If used, this should be a widely accepted code for the region. For example, in South Africa the list of municipality codes is available on Wikipedia.

Document subtype (optional) is the subtype of the work. Choose **(none)** for general Acts.

Year is the year of the work, generally the year it was first introduced in Parliament.

Number is the number of the work within the year. Most Acts are assigned a sequential number within the year of introduction. If you don't have a number available (eg. for by-laws) use a reasonable short form of the work's name or, as a last resort, use `nn` for *not numbered*. Use `cap123` for Chapter 123 in a Cap-based numbering system.

FRBR Work URI is the URI used to identify this work and is calculated from the other metadata. It uniquely identifies this work. You cannot edit this value.

Note: Administrators can add new countries and subtypes through the Admin interface. Click on your name in the top-right corner and choose **Site Settings**.

Promulgation

Publication date (optional) is the date on which this work was officially published, in the format `YYYY-MM-DD`.

Publication name (optional) is the name of the publication in which it was published, such as *National Gazette*.

Note: Administrators can set the publication names which are available in the drop-down list. Click on your name in the top-right corner and choose **Site Settings**, then edit a country in the Indigo Editor section.

Publication number (optional) is the number of the publication in which it was published, such as a gazette number.

Assent date (optional) is the date on which the President or other authority assented to the work, in the format `YYYY-MM-DD`.

Commencement date (optional) is the date on which the bulk of the work comes into force, in the format `YYYY-MM-DD`. If parts of the work come into force on different dates, place an editorial comment inline in the document indicating this.

Repeal

Repealing work The work which repealed this work, if any.

Repeal date (optional) is the date on which the work was repealed, in the format `YYYY-MM-DD`.

1.3.4 Managing Documents

Importing a new document

You can create a new document by importing an existing file, such as a PDF or a Word document. Indigo uses Apache Tika to import from a wide range of document types, including:

- MS Word (.doc and .docx)
- Rich Text Format (.rtf)
- PDF
- Plain text (.txt)

Simple documents such as Word (.doc) and RTF produce the best results.

Note: Follow these tips for getting the best results when importing documents:

- Prefer RTF or Word (.doc and .docx) documents; use PDFs only as a last resort
- Remove the Table of Contents at the start of the document
- Convert images to text

To import a document:

1. Click the arrow next to the **Library** button and choose **Import a document**.
2. Drag and drop the file to import into the box, or click the button to choose a file to upload.
3. Wait for the document to be imported. This make take up to 10 minutes, especially for large documents.

Once you have imported a document you will need to proof it to ensure that the various components have been correctly captured. Indigo doesn't always get everything right. Look for these errors after importing:

- Check that parts and chapters have been identified correctly.
- Check that numbered sections have been identified correctly.

- Check that numbered lists aren't broken in the wrong places.
- Check that schedules have been matched correctly.

See also:

See the section on *Editing Documents* for more details.

Indigo will do its best to extract text information from the imported document. You will still need to fill in all the metadata such as the document title, year of publication, etc.

Deleting a document

You can delete a document by going to the document Properties page and scrolling down to the **Danger Zone** section and clicking the **Delete this document** button.

Note: You cannot delete a published document. Mark it as a draft first.

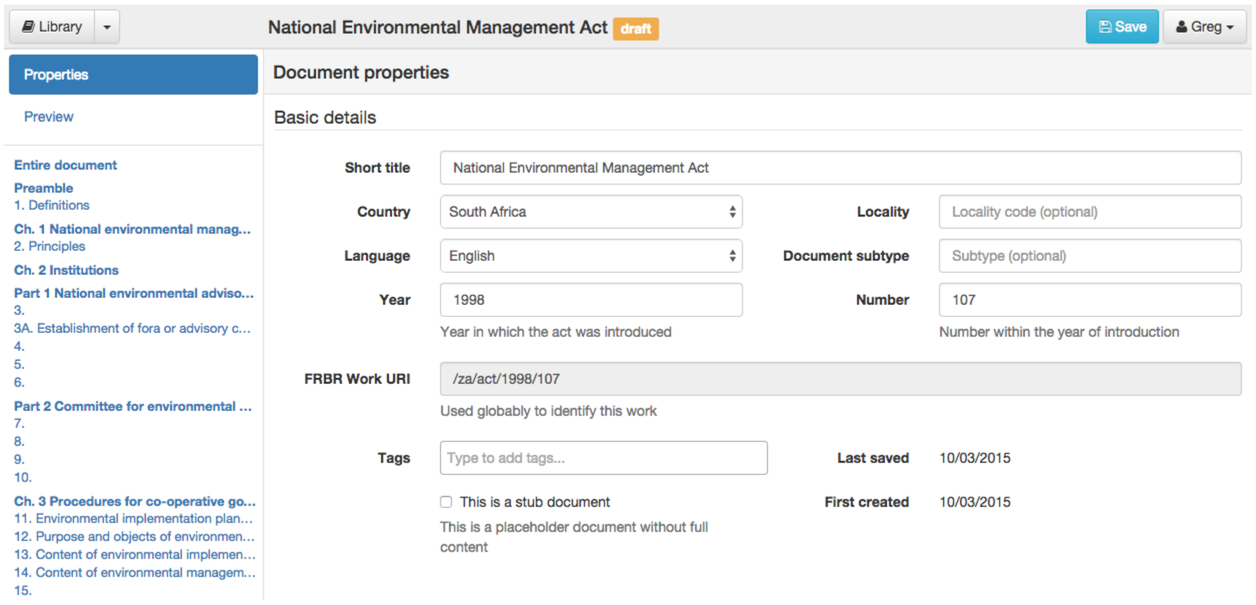
Note: Only users with the **Can delete document** permission can delete a document. An Administrator can change this for you in the Admin area.

Note: If you delete a document by accident an administrator can undelete it for you.

Administrators: visit `/admin/indigo_api/document/` and click on the document to recover, scroll down to find the **Deleted** checkbox, uncheck it and click **Save**.

Editing Metadata

The metadata is important for describing the document and making it available through the API.



Entire document
Preamble
1. Definitions
Ch. 1 National environmental manag...
2. Principles
Ch. 2 Institutions
Part 1 National environmental adviso...
3.
3A. Establishment of fora or advisory c...
4.
5.
6.
Part 2 Committee for environmental ...
7.
8.
9.
10.
Ch. 3 Procedures for co-operative go...
11. Environmental implementation plan...
12. Purpose and objects of environmen...
13. Content of environmental implemen...
14. Content of environmental managem...
15.

Document properties

Basic details

Short title: National Environmental Management Act
Country: South Africa
Locality: Locality code (optional)
Language: English
Document subtype: Subtype (optional)
Year: 1998
Year in which the act was introduced
Number: 107
Number within the year of introduction
FRBR Work URI: /za/act/1998/107
Used globally to identify this work
Tags: Type to add tags...
Last saved: 10/03/2015
This is a stub document
This is a placeholder document without full content
First created: 10/03/2015

Basic Details

Work The details of the work this document is linked to. Change the work by clicking the button.

Short title is the generally used title of the document. Most pieces of legislation declare what the short title will be.

Language is the language of the document.

Tags is a free-form collection of tags for this document. Use tags to manage your documents during editing and even after publication. To add a new tag, click in the box, type a new tag and press enter or comma. You can add as many tabs as you like. To delete a tag, either backspace or click the **x** next to the tag's name.

Note: Administrators can add new countries, languages and document subtypes through the Admin interface. Click on your name in the top-right corner and choose **Site Settings**.

Draft and Publishing

Draft controls whether the document is available publically. While you are editing the document, this should be **checked**. Outside users cannot see draft documents. Once a document is ready to be used by outside users, uncheck this box to indicate it is published.

Note: You cannot delete a published document. Mark it as a draft, first.

Amendments

The Amendments section records amendments that have been applied to reach **this version of the document**. If you are not editing the latest version of the document this must only include those amendments that have been applied to reach this point.

To record an amendment, you need the following information about the **amending document** (the document that caused the amendments to happen):

- the title
- date of publication (date at which the amendments took place)
- the FRBR URI of the document

If the amending document is already in the library, you can choose it from the list and have all these details filled in automatically.

To create a newly amended version of a document, edit the version just before the new amendments need to be applied and click **Clone Document** to create a copy, and then edit that copy.

Attachments

The Attachments section lets you attach files to your document. This is generally used to link a source PDF, Word or other file with your document, but you can upload any file you like. When creating a new document by importing a file, the file is automatically added as an attachment.

To upload a new file, click on **Attachments** and then click the **Choose Files** button.

You can change the name of an attachment by clicking the pencil (edit) icon.

Defined Terms Analysis

Indigo can find defined terms in a document and associate occurrences of a term with its definition. It does this by looking for a section called `Definitions` or `Interpretation` and looking for sentences that look like definitions. It then looks through the document to find uses of any defined terms it has found.

To find and link terms, click **Analysis** and then **Find and link defined terms**.

When viewing a document, Indigo marks the definition of a defined term **in bold**.

Important: Defined terms are lost when a section is edited. It's best to find and link defined terms just before publishing a final document, or after doing a batch of updates.

1.3.5 Editing Documents

If you're capturing a new document we recommend first capturing it using a standard word processor like Microsoft Word. Once you have the bulk of the document, import it into Indigo.

Indigo looks for structure in a document by looking for keywords such as *chapter* and *part*. It can identify different aspects of a document:

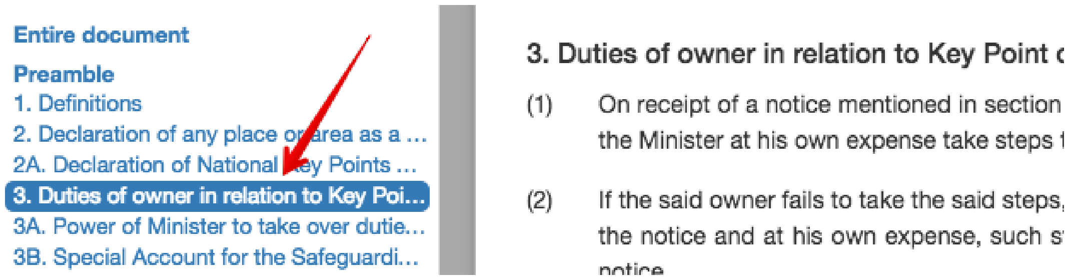
- Preface
- Preamble
- Parts and chapters
- Sections, subsections and numbered lists
- Schedules

Note: Indigo ignores presentation details such as font size, bold and italicised text, and indentation because those elements are used inconsistently by different authors. Indigo will apply new presentation rules based on the structure of the document.

Making and Saving Changes

The easiest way to make an edit is to use the Table of Contents on the left part of the document page to find the section in which to make the change.

1. Click on the heading of the part, chapter or section you wish to edit. Choose the smallest element that contains what you wish to change.

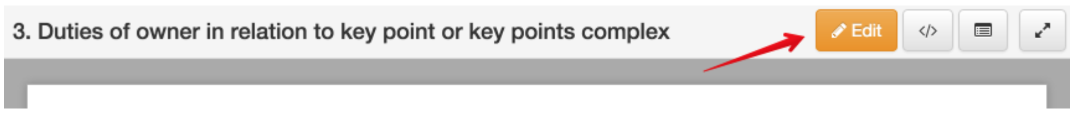

Entire document
Preamble
1. Definitions
2. Declaration of any place or area as a …
2A. Declaration of National Key Points …
3. Duties of owner in relation to Key Poi…
3A. Power of Minister to take over dutie…
3B. Special Account for the Safeguardi…

3. Duties of owner in relation to Key Point c

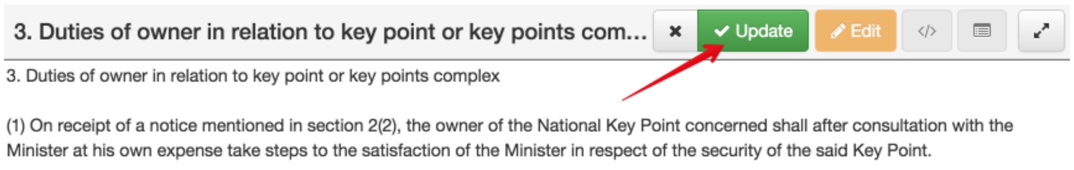
(1) On receipt of a notice mentioned in section
the Minister at his own expense take steps t

(2) If the said owner fails to take the said steps,
the notice and at his own expense, such s
notice

2. Click the **Edit** button in the top right corner of the document.


3. Duties of owner in relation to key point or key points complex
Edit

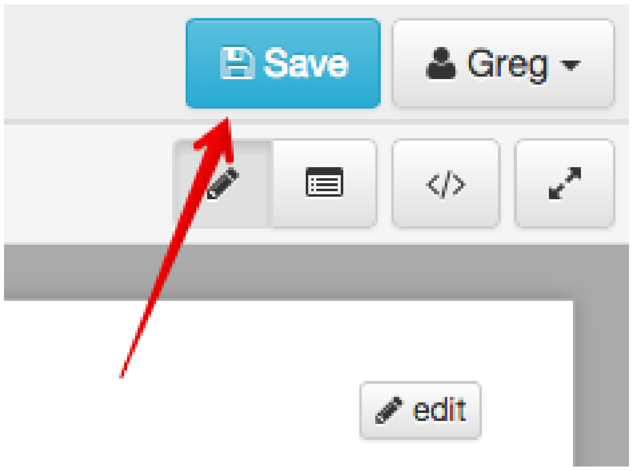
3. Indigo will show the simple editor. Notice that the content of the editor is the textual content of the section you're editing, without any formatting and with very simple layout.
4. Make the changes you require.
5. Click the **green tick** at the top-right corner where you clicked the **Edit** button.


3. Duties of owner in relation to key point or key points com...
Update
Edit

3. Duties of owner in relation to key point or key points complex

(1) On receipt of a notice mentioned in section 2(2), the owner of the National Key Point concerned shall after consultation with the Minister at his own expense take steps to the satisfaction of the Minister in respect of the security of the said Key Point.

6. Indigo will process your change and replace the editor with the new content.
   - If you've made an edit Indigo cannot understand, clicking the **green tick** will show an error. Correct your edit and try again.
   - To abandon your changes, click the **X** icon near the green tick.
8. Click the blue **Save** button to save your changes to the server.



Note: Bear these tips in mind when editing:

- Indigo can take a long time to process large sections. Choose the smallest containing element when editing.
- Use the existing content as a guide for how to format new content.

Editing Structure

Indigo cares about the structure of a document, not font sizes or layout. This means you need to follow a few simple conventions and Indigo will do all the hard work for you.

Here is an example of the simple formatting used by Indigo:

```
Chapter 8 - Environmental management co-operation agreements

35. Conclusion of agreements

(1) The Minister and every MEC and municipality, may enter into environmental␣
↪management co-operation agreements with any person or community for the purpose of␣
↪promoting compliance with the principles laid down in this Act.

[[Section 35(1) inserted by section 7 of Act 46 of 2003]]

(2) Environmental management co-operation agreements must-

(a) only be entered into with the agreement of-

(i) every organ of state which has jurisdiction over any activity to which such␣
↪environmental management co-operation agreement relates;

(ii) the Minister and the MEC concerned;

(b) only be entered into after compliance with such procedures for public␣
↪participation as may be prescribed by the Minister; and

(c) comply with such regulations as may be prescribed under section 45.
```

Indigo understands how to convert this into the XML that represents a chapter, section 35, subsections etc.

Notice that under subsection 1(a) above there is a sublist with items (i) and (ii). We don't bother trying to indicate that it is a sublist, Indigo will work that out based on the numbering.

You can think of this as focusing on the **content** of the document and using very simple **presentation** rules guided by a rough understanding of the **structure**. Compare this with an editor like Word which focuses heavily on the **presentation** of the content.

Chapters, Parts, Sections, etc.

Follow these guidelines to tell Indigo about the structure of your document:

- Start the preface like this:

  ```
  PREFACE
  ```

- Start the preamble like this:

  ```
  PREAMBLE
  ```

- Start a chapter like this:

  ```
  Chapter 2 - Interpretation
  ```

- Start a part like this:

  ```
  Part 1 - Applications
  ```

- Start a section like this:

  ```
  1. Definitions
  ```

- Numbered subsections must have a number in parentheses at the start of the line:

```
(1) The content of section 1.

(2) The content of section 2.
```

- Subsections or statements without numbers can be written as-is:

```
A statement without a number.
```

- Numbered sublists must have a number in parentheses at the start of the line:

```
(a) sublist item a

(b) sublist item b
```

- Start a Schedule like the example below. The number `1`, the `Title` and `Heading` parts are optional, you can leave them out if necessary:

```
Schedule 1 - Title
Heading

or

Schedule - First Schedule
Subtitle
```

Tables

Often a piece of legislation will include tables, for example in Schedules.

The easiest way to edit these is to click the **Edit Table** button at the top right corner of the table.

- Simply type your changes into the table and click **Update** when you're done.
- Use the buttons in the toolbar to add and remove columns and rows, and to set cells as heading cells.

- To **merge** cells, use the mouse to select the cells and click **Merge cells**.
- To **split merged cells**, select the cells and click the **Merge cells** button again.

Editing Tables in the Simple Editor

You can also edit tables in the simple editor. Indigo uses the same text format for tables that Wikipedia uses.

See also:

Be sure to read Wikipedia's tutorial for writing tables.

Use this table generator website to easily start building a new table for a document.

Don't use `class="wikitable"` even though they recommend it.

This code:

```
{|
|-
! header 1
! header 2
! header 3
|-
| row 1, cell 1
| row 1, cell 2
| row 1, cell 3
|-
| row 2, cell 1
| row 2, cell 2
| row 2, cell 3
|}
```

produces a table that looks like this:

Header 1	Header 2	Header 3
row 1, cell 1	row 1, cell 2	row 1, cell 3
row 1, cell 1	row 1, cell 2	row 1, cell 3

Notice how we don't explicitly make the header row bold. We simply indicate in the **structure** that those cells are headers by using `!` at the start of the cell's line instead of the normal `|`. Indigo will format the cell appropriately.

Telling Indigo to Ignore Special Items

Sometimes it's useful to be able to tell Indigo not to interpret a line specially. Do this by starting the line with a backslash \.

This is particularly useful when a paragraph starts with a text that Indigo would normally interpret as a section or subsection. For example:

```
Fill in this form:

\1. State ......................................
\2. Date Received ..........................
\3. Checked ...................................
\4. Certificate Issued ......................
\5. Certificate No. .........................
\6. Treasury Receipt No. ................
```

By starting each line with \ Indigo knows that it shouldn't treat those lines as section numbers.

Adding new Chapters, Parts and Sections

You can easily add a new chapter, part or section to a document. To do so:

1. edit the chapter, part or section just before where the new one needs to go
2. at the bottom, add the new chapter, part or section heading and content
3. click the green Update button

Links

Add a link in the text of your document using this syntax:

```
[link text](http://example.com/page)
```

That will create a link like this: link text

Images

You can embed an image in your document using this syntax:

```
![alternative text](/media/image.png)
```

That will create an image using the `image.png` file added to your document as an attachment.

Downloading PDF and Standalone HTML

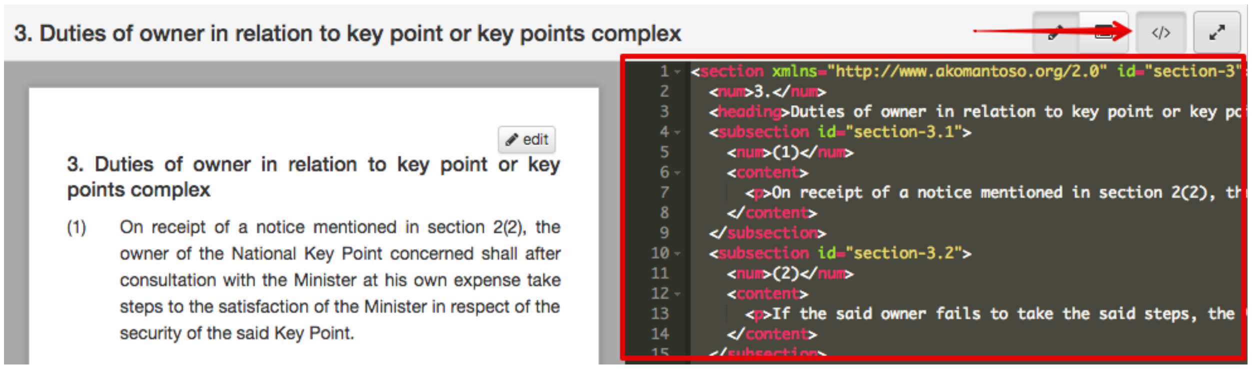
You can download PDF and standalone (self-contained) HTML versions of a document. These are useful for distribution and archiving. Go to **Preview** and click the **Download** button.

Downloaded and PDF documents can have a *colophon*, which is a page right at the start of the document which contains copyright, ownership and other information. A colophon is automatically chosen for a document based on document's country.

Note: Administrators can add new colophons through the Admin interface. Click on your name in the top-right corner and choose **Site Settings**.

Viewing the XML

It can be useful to see what the Akoma Ntoso for a piece of the document looks like. Click the **Show Code** button to do this:


3. Duties of owner in relation to key point or key points complex

3. Duties of owner in relation to key point or key points complex

(1) On receipt of a notice mentioned in section 2(2), the owner of the National Key Point concerned shall after consultation with the Minister at his own expense take steps to the satisfaction of the Minister in respect of the security of the said Key Point.

```
<section xmlns="http://www.akomantoso.org/2.0" id="section-3"
  <num>3.</num>
  <heading>Duties of owner in relation to key point or key po
  <subsection id="section-3.1">
    <num>(1)</num>
    <content>
      <p>On receipt of a notice mentioned in section 2(2), th
    </content>
  </subsection>
  <subsection id="section-3.2">
    <num>(2)</num>
    <content>
      <p>If the said owner fails to take the said steps, the
    </content>
  </subsection>
```

1.3.6 The Admin Area

Indigo has a backend Admin area that lets adminstrator users control some internal settings of how Indigo works. Only adminstrator (staff) users have access to this area.

Logging In

To log into the Admin area:

1. Log into Indigo
2. Click your name in the top-right corner
3. Click **Site Settings**

Note: If the **Site Settings** option isn't visible, then you aren't a staff member and don't have permission to view the admin area.

Permissions

Indigo uses Django's permission system to control who can create, edit, delete and publish documents. This can help prevent documents from being deleted and published accidentally.

Permissions can be assigned to individual users, or to **groups**. Users who belong to groups get permissions from those groups.

To edit permissions,

1. Click on **Users** or **Groups** in the Admin area.
2. Choose the user or group to edit (or create a new user or group)
3. Scroll down to the permissions boxes.

The permissions that are important are:

indigo_api | work | Can add work Allows the user to create new works. This doesn't allow a user to edit existing works.

indigo_api | work | Can change work Allows the user to edit existing works.

indigo_api | work | Can delete work Allows the user to delete works.

Note: Only give work permissions to experienced users.

indigo_api | document | Can add document Allows the user to create and import a new document. This doesn't allow a user to edit existing documents.

indigo_api | document | Can change document Allows the user to edit existing documents.

indigo_api | document | Can delete document Allows the user to delete documents.

indigo_api | document | Can publish and edit non-draft documents Allows the user to mark a document as *published (not a draft)* and, along with the *change* permission, edit published documents.

Note: Only give the **delete** and **publish** permissions to experienced users.

indigo_api | annotation | Can add annotations Allows the user to annotate (add comments) to documents.

indigo_api | annotation | Can change document Allows the user to edit their annotations.

indigo_api | annotation | Can delete annotation Allows the user to delete their annotations.

Adding New Admins

To give admin permissions to a user, which allows them to log into the Admin area:

1. Click on **Users** in the Admin area.
2. Click on the user you wish to make an Admin.
3. Check the **Staff status** checkbox in the Permissions section and click Save.

1.4 Introduction to the Terminology of Law

What do you understand by the word "law"? It is a word which can have many meanings, but in the language of law publishing, it means a piece of legislation which regulates the way in which things are done or should be done in many spheres of life, especially in public, in order to maintain good order and prevent the growth and flourishing of anarchy.

Law according to the Roman Dutch and British systems has developed over several centuries. A great deal of the language is therefore antiquated and sometimes quite difficult to understand.

Note: This content is adapted with permission from a training guide prepared by Adrienne Pretorius for AfricanLII.

1.4.1 Levels of legislation

In South Africa, we have three levels of legislation. These are **national**, **provincial**, and **municipal**. Most jurisdictions have at least two levels: national and local government.

National legislation: This is usually published as Acts and Regulations and/or Rules. See the later sections on publication of an Act.

Provincial legislation: When our nine provinces were established, they already had a number of Ordinances which authorised them to make bylaws at municipal level. In addition to being allowed to retain many of their Ordinances when the changes were made from four to nine provinces, they were allocated certain levels of legislative involvement in respect of which they were granted the power to draft, debate on, pass and eventually publish Acts and Regulations and/or Rules. The old Ordinances were gradually repealed, and very few of them are still in existence today. When provincial legislation originally got under way in the early 1990s, the early provincial Acts used to be called laws, but they are now all called Acts.

Municipal legislation: This is usually published as Bylaws.

As most jurisdictions publish Acts, Regulations and/or Rules, we are going to concentrate on this level of legislation.

Note: From here onwards, any reference to an Act or Acts also applies to other types of legislation. You will learn about some of these later.

1.4.2 Publication of Acts

A *Gazette* is an official newspaper, and in most countries, legislation as well as a large variety of other legal notifications are published in gazettes. In South Africa, Acts are usually published by means of a Government Notice in *Gazettes*. There are some exceptions. For example, our Public Service Act of 1994 does not have an Act number; it is Proclamation 103 of 1994. This is very unusual in terms of our legal system, which falls into a classification known as Roman-Dutch law. We follow this system because the first colonial settlers were Dutch, and they introduced the same system that they used in their home country of Holland.

A *Gazette* has a number of important features:

- Firstly, the **type of Gazette** (national or provincial) is shown clearly on the cover (first page) of the Gazette. Either our national coat of arms or the coat of arms of one of our nine provinces will appear on that page, together with the words *"National Gazette"* or *"Provincial Gazette"*.
- Secondly, the **date** must appear on the first page. This is extremely important. Do you know why? The reason is that the date of commencement of an Act is often linked to the date of publication.
- Thirdly, there will be a **Gazette number**. This information helps us when we are searching for missing legislation.
- Below those details will be a short paragraph telling us who **assented** to the Act (agreed that it could be published and made available to the public). This section will include the **Government Notice (or Provincial Notice) number** and the **date** on which the Act is promulgated. This is also sometimes referred to as the date on which the Act was signed into law.
- This is followed by the **number** and **year** of the Act, as well as its **short title**.

Note: IT IS IMPORTANT TO NOTE THAT THE FRONT COVER DOES NOT FORM PART OF THE ACT, AND THAT THERE ARE OFTEN ERRORS ON THIS PAGE (THE COVER). **NEVER** TAKE THE NUMBER, YEAR OR TITLE OF AN ACT FROM THIS PAGE. YOU **MUST** CHECK AGAINST THE DETAILS INSIDE THE GAZETTE AND IN THE SHORT TITLE OF THE PUBLISHED ACT.

Other information on the first page will usually include the volume number of the *Gazette* and the place in which the *Gazette* was printed. In the case of South African Acts, this is often Cape Town, but most of our *Gazettes* are printed in Pretoria (Tshwane), where the official premises of the Government Printer are situated.

1.4.3 Types of Act

Acts fall into a number of categories. The two main categories are principal and amendment Acts. Others include Appropriation Acts and Division of Revenue Acts, which regulate the spending of public money (these are said to be **ephemeral** – the information which they contain changes on a regular basis).

Principal Acts

Principal Acts are by far the most important category of Act. They lay the foundation for court decisions.

Note: Always remember that Statute law and judicial precedent (Court judgments) form the foundation of any justice system.

Amendment Acts and other amending notices

It is important to note that it does not matter how many times a principal Act is amended; it will ALWAYS retain its original number (for example, Act 71 of 2008). The only time the Act number may change is in a case where an error has been made in the Statutes books and the Act has inadvertently been incorrectly numbered. I can think of only one instance where this has happened, and it was long before I became a Statutes editor. It is far more likely that the short title will be changed altogether (in other words, the Act is renamed).

In most countries, principal legislation may be amended by principal Acts, amendment Acts, and subsidiary legislation. Some Acts do not provide for this, or provide specifically for amendment only by Act. Remember that principal Acts may also contain at least one repeal, if the Act replaces an existing Act dealing with the same area of law.

Amendments of any kind cannot be made if the amending provisions are not in operation. Always check before you start updating, and also check for whether certain provisions commence on different dates from the rest of the Act.

It is also important to know that amendment Acts do not always amend only one Act. The short title may therefore not be a guide as to which Act is amended. For example, a Revenue Laws Amendment Act may amend several Acts or every Act dealing with revenue (State income), or only one or two, and it may also amend other Acts.

1.4.4 Components (parts) of an Act

A law or Act is usually made up of a number of different components or parts. Some of these are:

- The title, usually called the "short title", which is the name by which the Act is known. The short title often has a reference to the date of commencement (see the later section dealing with dates of commencement)
- Details with regard to the date of promulgation (publication); who assented to (approved) the legislation; which language was signed (in multilingual countries/jurisdictions); and what the date of commencement is
- The long title, which explains briefly why the Act was made
- An Arrangement of Sections (this is not part of the law, but assists in navigating through an Act or other piece of legislation, especially lengthy documents)
- Chapters or Parts, identified by their headings (these are subdivisions used to arrange the information in an Act or other piece of legislation. In some countries, especially those which were once under British rule, the Acts are known as Chapters or by a Latin abbreviation, "Cap")
- A number of sections/regulations/rules (according to the nature of the legislation)
- Side headings to the various sections (as with the Arrangement of Sections, these are not part of the law, but assist in navigating through an Act or other piece of legislation)
- A section containing definitions (the meaning of words as used in the particular Act. This is a very important section, because words have different meanings in different contexts; and in law, we very often have to look at other Acts to see what a certain word means in context)
- Subsections/subregulations/subrules (as above)
- Paragraphs (usually (a), (b), and so on)
- Subparagraphs (usually identified by small Roman numerals: (i), (ii), (iii), and so on)
- Schedule(s)
- Tables and diagrams.

The *short title* is the commonly known name of a law or Act, as it is called in most countries. It usually includes the number of the Act and the year in which it belongs. Many years ago, Acts were always passed in the year to which they were allocated. For example, all Acts passed in 1984 were printed and published before the end of 1984. As the years have gone by, parliamentary sessions have become longer and less orderly, and as a result, less legislation is passed in each year.

However, Acts which have not been promulgated and published in the year in which they are allocated will be passed in a subsequent year, **but will still retain the original year in the number**. For example, we are still waiting for the Protection of State Information Act 41 of 2013 (known commonly in South Africa as the "Secrecy" Act) to be published. The number has been allocated, but the Act has not yet been promulgated. Even if it is published only in five years' time, it will still be Act 41 of 2013. In some cases, Acts which are awaiting promulgation are repealed (removed from the Statutes book) without ever being made available to the public except in Bill form.

Note:

- A reference to "**the Statutes book**" refers nowadays to the computerised record of all principal and amendment Acts published and still operative in terms of South African law. Many years ago, this was a physical book (or rather, a very large set of books) containing these records, and a repeal entailed physically removing the record of the particular Act from the official book.
- A **Bill** is a preview of what an Act will contain. Some Bills are passed after their first version has been published, while others may go back time and again for further revision by the various Parliamentary committees.]

The **long title** is a summarised breakdown of what the purpose of the Act is. It may be presented in only a few words, in some cases, while in others, particularly financial measures, it can run to several pages.

The **Arrangement of Sections/Regulations/Rules** is an aid to navigating through a document, especially a very long one. It does not form part of the law, and in fact, many Acts have no Arrangement of Sections. If you are ever involved in law revision and consolidation, you will probably be asked to insert an arrangement of Sections wherever there isn't one.

Chapters and **Parts** are subdivisions in South African Acts. There is no set pattern as to how these are applied in an Act. Sometimes there are Chapters only, and sometimes Parts only. In some cases, Chapters are divided into Parts. So there is no hard-and-fast rule regarding the use of Chapters and Parts in South African legislation. In some countries, a reference to a "Chapter" is a reference to an Act, and is usually abbreviated to "Cap", as mentioned above.

Sections are the "meat" of an Act. They flesh out the provisions relating to the subject matter of an Act. They are numbered in sequence, but insertions are often made at a later stage, modifying the original numbering section by inserting, for example, a new section 13A.

The **side headings** to sections (also referred to sometimes as "marginal notes") do NOT form part of the law, and can be edited and/or replaced when revising and consolidating legislation. In an ordinary revision service, it is not wise to change these side headings, because people tend to refer to a particular section by that side heading as well as the number of the section.

Paragraphs, **subparagraphs** and **items** are further subdivisions in an Act (and are sometimes even further subdivided), but they depend on a higher level of the hierarchy of the Act (see the section below on the hierarchy of the components of an Act) – they will usually not be found standing independently in an Act.

We refer later to "lists" of legislation in Acts. This means any sequential arrangement of information, so it could refer to the sections, paragraphs, and so on, as well as what are generally known as "lists" (see the section below on the hierarchy of the components of an Act, where there is a list of words).

Schedules fall into many different categories. The majority of them will contain amendments and/or repeals of legislation. However, many of them contain provisions supplementary to the text of the Act in which they appear. For example, an Act dealing with the establishment of a new council may contain the constitution, functions and duties of the council and its members. The South African Labour Relations Act 66 of 1995 contains a Code of Dismissal in one of its numerous Schedules. Acts relating to the Defence Force or Police or other protective bodies often have their regulations in a Schedule following the text of the Act. The South African Criminal Procedure Act 51 of 1977 has schedules relating to various categories of crime according to how severely these offences are punishable.

Whatever form it may take, a Schedule to an Act always contains supplementary information of importance in meeting the objectives of the Act. There is usually an indication of the section which governs the Schedule, and by referring to that section number, you will be able to see what the purpose of the Schedule is. A Schedule may also be governed by a number of sections.

Tables and **diagrams** can cause problems. It may not always be possible to position insertions of this kind exactly where they appear in the Gazette. For this reason it is advisable not to refer to tables, illustrations or diagrams by page number or by phrases such as "the diagram below". Each individual table, illustration or diagram should be given a specific label.

1.4.5 Hierarchy of various features forming part of an Act

The words below show the parts into which an Act is usually divided, and how we name those parts:

- Chapter/Part
- Section
- Subsection
- Paragraph
- Subparagraph
- Item
- Subitem (or sub-item)
- Sub-subitem (or sub-sub-item)
- Schedule

We usually abbreviate the terms above when annotating. Always check Acts already in the database before you start annotating to ensure that your abbreviations match those already in the publication, if abbreviations have been used.

1.4.6 Cut-off date

When doing any type of law revision, it is important to decide exactly which legislation is to be included in the update. Once you have collected all the new legislation, go through all of the notices carefully and arrange them in chronological order. The date of the last notice which is in operation should be set as the cut-off date, unless you work specifically within monthly, quarterly or half-yearly periods. It is good practice not to change the date continually, but it also pays to be flexible sometimes. If a really important piece of legislation is passed after the cut-off date, the value to your subscribers/clients of including that notice should be weighed against working strictly to schedule and excluding legislation published after the cut-off date.

1.4.7 Identifying under which title an Act belongs

It is useful to classify published legislation under a number of different titles rather than searching through a large database with no subdivisions. This is usually done by seeing which Acts are controlled by the same Minister (for example, the Minister of Agriculture). Most Acts contain a definition indicating which government department or Minister (or MEC or other person or organisation) controls the provisions of that Act. If there is no specific Minister or department named, it is sometimes possible to find this information by knowing where to look for clues. The first page of Gazettes containing Acts will usually indicate who has assented to the Act. While this is usually the head of the government, it may in fact be the relevant Minister, provided that the Act allows for that contingency. Nowadays, various government websites contain legislation relating to particular portfolios (areas of responsibility). So a search on Google will often provide the answer you need. If necessary, or when you are unsure, you should contact the legal drafting section of your Legislature and ask them for clarity. This applies only if you classify your information as outlined above. Some countries prefer not to do so.

1.4.8 Determining the date of commencement

No amendments can be made to legislation if the amending provisions are not in operation.

When no indication of the date of commencement is given in the short title or a section dealing exclusively with commencement, the date of commencement is usually the date of the Gazette.

However, **THIS IS NOT ALWAYS THE CASE**.

Before you enter a date or dates of commencement, you need to consult the **Interpretation Act** of the particular country or jurisdiction. In most cases, it is made clear that the date of commencement is the date of the Gazette if no other indication is made. But sometimes, the date of commencement is defined differently. For example, section 13 of our Interpretation Act 33 of 1957 (commencement of laws) provides as follows:

> "(1) The expression 'commencement' when used in any law and with reference thereto, means the day on which that law comes or came into operation, and that day shall, subject to the provisions of subsection (2) and unless some other day is fixed by or under the law for the coming into operation thereof, be the day when the law was first published in the Gazette as a law.
>
> "(2) Where any law, or any order, warrant, scheme, letters patent, rules, regulations or by-laws made, granted or issued under the authority of a law, is expressed to come into operation on a particular day, it shall be construed as coming into operation immediately on the expiration of the previous day."
>
> **Note:** In other words, if the date of commencement is 18 May 2015, the piece of legislation will commence as the clock strikes midnight on the night of 17 May 2015.
>
> "(3) If any Act provides that that Act shall come into operation on a date fixed by the President or the Premier of a province by proclamation in the Gazette, it shall be deemed that different dates may be so fixed in respect of different provisions of that Act."

The word "deemed" means "considered" or "understood".

Note that there may be many different dates of commencement in any given Act. If this is done, the short title or the provision regarding commencement should allow for different dates to be applied. However, the Interpretation Act has provided for cases where the draftspersons have not included this provision in an Act (see subsection (3) in the quotation above).

A date of commencement may be applied retrospectively. This means that a date of commencement may be earlier than the date of the Gazette. This is done for various reasons, which are not important at this point.

Meaning of "promulgation" and "proclamation"

The word "**promulgation**" means making known to the public. A word which is often used in the same sense is "**proclamation**". However, in law, promulgation of an Act must take place before a proclamation made under that Act can be issued. The new Act may make provision for a proclamation to be made determining the date or further dates of commencement. Sometimes a "notice" is referred to. In South Africa this is usually a Government Notice.

The date on which an Act commences is not necessarily the first date which is proclaimed. While that date certainly applies, if it brings only a few provisions into operation, the actual date of commencement will be one when most of the provisions not yet in operation are brought into force. In cases like this, you will use the first date of commencement, until it becomes clear that that date is not appropriate. You will then need to insert the correct date of commencement, and add the words "(unless otherwise indicated)", then annotate the sections which came into operation earlier (see the section on annotating). Do you see above how many different expressions can be used in connection with dates of commencement? You'll eventually become familiar with all of them, even if it seems confusing at first.

1.4.9 Consolidating and annotating

This kind of work involves two very important concepts: **consolidating** and **annotating**.

If you are busy with a law revision, consolidation is a very large part of what you have to do. It is accompanied by annotation, the purpose of which is to ensure that the history of what has happened to a particular piece of legislation is shown fully. Annotations are usually added below the part of an Act which is amended, although there are exceptions. As they are interventions by the editor (they are not part of the original text), they should be in square brackets.

Consolidation of legislation is usually done to simplify legislation which has been frequently amended. All superfluous or obsolete provisions are removed, and the Legislature and the Courts will now have a relatively "clean" piece of legislation with which to work, showing all changes which have occurred to the Act since it was first published except for the ones which are no longer of value in the eyes of the law or which had previously been repealed.

As you will probably not be involved in consolidating legislation for a law revision (which is usually done by experts in the field), we won't spend too much time on that right now. We'll look at updating (which is part of consolidation) and annotating.

1.4.10 Inserting/Adding

You will often be asked to add or insert provisions, and it is important to differentiate between the two functions. Even legal draftspersons occasionally confuse them, so be very careful when reading instructions in amending legislation. Inserted provisions are usually quite easy to identify. They will most often have a capital A, B, and so on after the section or subsection (or paragraph) number (for example, "section 5A", or "subparagraph (ivD)", or other similar expressions). However, you may have a section in an amendment Act which requires you to insert provisions, but these are purely and simply subsequent numbering, for example, "insert paragraphs (d) and (e) after paragraph (c)". It is quite clear that these paragraphs are not being inserted; they are being added, and you can reflect that in your annotations:

> [Para (d) **added** by . . .]

Similarly, if the instruction requires you to add subsection (3A), it is more likely that (3A) is being inserted:

> [Subsection (3A) **inserted** by . . .]

You may wonder why we are allowed to change these words to suit what is actually done instead of following what is in the Gazette. The reason we can do so is that they are in the editor's annotations, which do not form part of the law.

Occasionally, you will find that something had previously been deleted (repealed), and you are re-inserting it. It does happen from time to time, and you need to annotate it exactly as if it is a brand new insertion.

You may also occasionally find that you are asked to delete or repeal something which has previously been annotated as having been deleted or repealed. In a case like that, simply update the annotation. If you put in a date of commencement, it will make what has happened clearer to subscribers and clients, but that kind of enhancement must be part of your updating style – it must be applied consistently.

If you feel uneasy about that remedy, contact legal drafting and discuss the problem with them.

Changing of punctuation after adding or inserting

Sometimes you will be asked to add something at the end of an existing series of entries. For example, if you look at the instruction to "insert paragraphs (d) and (e) after paragraph (c)" (you will actually be adding them), the chances are that (c) has a full stop at the end. If it does, you will need to change that to a semi-colon or comma (more often a semi-colon – check what has been used previously in the listed series), add (not insert) and annotate the two new paragraphs, and ensure that the last one in the series has the same punctuation as (c) originally had.

1.4.11 LRO (Law Revision Order) or Revision Service number

If your legislation is printed, only parts which have changed will be updated (see the section on loose-leaf updating – loose-leaf is the most cost-effective way of publishing a print update). The Attorney-General or President/Prime Minister or head of the legislative drafting services will issue a notice at some point which will proclaim or determine the cut-off date, or mention that the legislation has been updated from the day after the previous service up to the cut-off date for the current service. This notice is usually referred to as the LRO for the update, and the LRO number will be the identifying number for the service. It must be reflected on all pages which have been replaced during the update. In countries where the LRO system is not used (for example, South Africa), this number will be referred to as the Revision Service (or merely Service) number.

1.5 Using the Indigo API

This guide is for developers who want to use the API to fetch legislative works. We assume that you have a basic understanding of REST APIs and the Akoma Ntoso standard for legislation (acts in particular).

Note: The API relies heavily on Akoma Ntoso FRBR URIs, which are described in the Akoma Ntoso naming convention standard.

1.5.1 Getting Started

The API is a read-only API for listing and fetching published versions of legislative works. Using it, you can:

- get a list of countries and localities
- get a list of all works by country and year
- get a JSON description of a work
- get Akoma Ntoso XML for a work
- get a human-friendly HTML version of a work

Note: When we use a URL such as `/api/v2/frbr-uri/` in this guide, the `frbr-uri` part is a full FRBR URI, such as `/akn/akn/za/act/1998/84`.

1.5.2 Works and Expressions

Two important concepts that are an essential part of the API are **works** and **expressions**.

- A **Work** is a piece of legislation, such as an act, regulation or by-law. A work may be amended over time and may even have its title changed. A work is uniquely identified by a *work FRBR URI* which never changes.
- An **Expression** is a version of a Work in specific language at a particular point in time. A work can have many expressions, usually one for each official language and amendment. An expression is uniquely identified by its own *expression FRBR URI*, which is derived from the work's FRBR URI.

An example of a work is the South African *Employment Equity Amendment Act, 2013 (Act 55 of 1998)* with unique work FRBR URI `/akn/za/act/1998/55`. This act has been amended a number of times since it was first passed. Each amended version (also called a *point in time*) is a unique expression of the work.

The English expression of the work, as it was amended on 17 January 2014, is uniquely identified by the expression FRBR URI `/act/1998/55/eng@2014-01-17`. You can see that this is built from the work's URI, with a language code `eng` and the expression date `2014-01-17` included.

Note: When fetching details from the API, you are always fetching details for a particular expression of the work. The expression will also include information related to the expression's work, such as the work's FRBR URI and publication information.

Even if you don't specific a particular date for the expression, the API will return the latest expression applicable for the date of the request.

1.5.3 Location of the API

The API is available at the */api/v2/* URL of your Indigo installation.

Version 1 `/v2/` of the API is deprecated and will be removed soon.

1.5.4 Authentication

You must authenticate all calls to the API by including your API authentication token in your request. Include in your request an HTTP header called `Authorization` with a value of `Token <your-api-token>`. For example:

```
Authorization: Token 9944b09199c62bcf9418ad846dd0e4bbdfc6ee4b
```

1.5.5 Pagination

API calls that return lists will be paginated and return a limited number of items per page. The response includes information on the total number of items and the URLs to use to fetch the next and previous pages of items.

Here's an example of the first page of a paginated response with 250 total items and two pages:

```
{
  "count": 250,
  "next": "https://indigo.example.com/api/v2/akn/za.json?page=2",
  "previous": null,
  "results": [ "..." ]
}
```

In this case, fetching the `next` URL will return the second (and final) page.

1.5.6 Content types

Some API calls can return content in multiple formats. You can specify the required content of your request by placing `.format` at the end of the URL. In most cases the default response type is JSON.

- `.json` or `Accept: application/json`: return JSON
- `.xml` or `Accept: application/xml`: return Akoma Ntoso XML
- `.html` or `Accept: text/html`: return human friendly HTML
- `.epub` or `Accept: application/epub+zip`: return an ePUB (ebook) document
- `.pdf` or `Accept: application/pdf`: return a PDF document
- `.zip` or `Accept: application/zip`: return a ZIP file with the document XML and media attachments

Note: Not all responses support all formats, the documentation will be explicit about what is supported.

1.5.7 Countries and Localities

```
GET /api/v2/countries.json
```

This returns a list of the countries and localities that Indigo knows about. It includes links to the APIs for listing works for each country and locality.

1.5.8 Fetching a Work

```
GET /api/v2/frbr-uri.json
```

This returns the detail of an expression of a work as a JSON document. For example, this is the description of the English expression of Act 55 of 1998 as at 2014-01-07.

```
{
  "url": "https://indigo.example.com/api/v2/akn/za/act/1998/55/eng.json",
  "title": "Employment Equity Act, 1998",
  "created_at": "2017-12-23T10:05:55.105543Z",
  "updated_at": "2018-06-07T08:07:51.170250Z",
  "country": "za",
  "locality": null,
  "nature": "act",
  "subtype": null,
  "year": "1998",
  "number": "55",
  "frbr_uri": "/act/1998/55",
  "expression_frbr_uri": "/act/1998/55/eng@2005-10-03",
  "publication_date": "1998-10-19",
  "publication_name": "Government Gazette",
  "publication_number": "19370",
  "expression_date": "2014-01-17",
  "commencement_date": "1999-05-14",
  "assent_date": "1998-10-12",
  "language": "eng",
  "repeal": null,
  "numbered_title": "Act 55 of 1998",
  "amendments": [
    {
      "date": "2014-01-17",
      "amending_title": "Employment Equity Amendment Act, 2013",
      "amending_uri": "/akn/za/act/2013/47"
    },
  ],
  "points_in_time": [
    {
      "date": "2014-01-17",
      "expressions": [
        {
          "url": "https://indigo.example.com/api/v2/act/1998/55/eng@2014-01-17",
          "language": "eng",
          "expression_frbr_uri": "/act/1998/55/eng@2014-01-17",
          "expression_date": "2014-01-17",
          "title": "Employment Equity Act, 1998"
        }
      ]
    }
```

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```
  ],
  "links": [
    {
      "href": "https://indigo.example.com/api/v2/akn/za-wc033/act/by-law/2005/beaches/
↪eng.html",
      "title": "HTML",
      "rel": "alternate",
      "mediaType": "text/html"
    },
    { "..." }
  ]
}
```

The fields of the response are described in the table below.

Field	Description	Type
amendments	List of amendments that have been applied to create this expression of the work.	See below
assent_date	Date when the work was assented to.	ISO8601
content_url	URL of the full content of the work.	URL
country	ISO 3166-1 alpha-2 country code that this work is applicable to.	String
created_at	Timestamp of when the work was first created.	ISO8601
draft	Is this a draft work or is it available in the public API?	Boolean
expression_date	Date of this expression of the work.	ISO8601
commencement_date	Date on which this work commences.	ISO8601
expression_frbr_uri	FRBR URI of this expression of this work.	String
frbr_uri	FRBR URI for this work.	String
id	Unique ID of this work.	Integer
language	Three letter ISO-639-2 language code for this expression of the work.	String
links	A description of links to other formats of this expression that are available through the API.	
locality	The code of the locality within the country.	String
nature	The nature of this work, normally “act”.	String
number	Number of this work with its year, or some other unique way of identifying it within the year.	String
numbered_title	Title of the work using only its numbering system (may be null).	String
publication_date	Date of original publication of the work.	ISO8601
publication_name	Name of the publication in which the work was originally published.	String
publication_number	Number of the publication in which the work was originally published.	String
repeal	Description of the repeal of this work, if it has been repealed.	See below
subtype	Subtype code of the work.	String
title	Short title of the work, in the appropriate language.	String
updated_at	Timestamp of when the work was last updated.	ISO8601
url	URL for fetching details of this work.	URL
year	Year of the work.	String

Amendments

The fields of the `amendments` property of the response are described below.

Field	Description	Type
amending_title	Title of the amending work	String
amending_uri	Work FRBR URI of the amending work	String
date	Date on which the amendment takes place	ISO8601

Points in Time

The fields of the `points_in_time` property of the response are described below.

Field	Description	Type
date	Date of the point-in-time for which expressions are available	ISO8601
expressions	A list of expressions for this work available at this point in time	
url	The API URL to fetch information on the expression	URL
language	Three-letter language code of the language of the expression	String
expression_frbr_uri	Unique Expression FRBR URI for this expression	String
expression_date	Date of this expression	ISO8601
title	Title of the work, appropriate for the expression in the expression's language)	String

1.5.9 Fetching the Akoma Ntoso for a Work

```
GET /api/v2/frbr-uri.xml
```

This returns the Akoma Ntoso XML of an expression of a work.

For example, fetch the most recent applicable English Akoma Ntoso expression of `/akn/za/act/1998/55` by calling:

```
GET /api/v2/akn/za/act/1998/55/eng.xml
```

1.5.10 Fetching a Work as HTML

```
GET /api/v2/frbr-uri.html
```

Fetch the HTML version of a work by specify *.html* as the format extensions in the URL.

- Parameter `coverpage`: should the response contain a generated coverpage? Use 1 for true, anything else for false. Default: 1.
- Parameter `standalone`: should the response by a full HTML document, including CSS, that can stand on its own? Use 1 for true, anything else for false. Default: false.
- Parameter `resolver`: the fully-qualified URL to use when resolving absolute references to other Akoma Ntoso documents. Use 'no' or 'none' to disable. Default is to use the Indigo resolver.
- Parameter `media-url`: the fully-qualified URL prefix to use when generating links to media, such as images.

For example, fetch the most recent applicable English HTML expression of `/akn/za/act/1998/55` by calling:

```
GET /api/v2/akn/za/act/1998/55/eng.html
```

1.5.11 Fetching Expressions of a Work

You can fetch specific expressions of a work by including expression-specific information in the requested FRBR URI. The API supports the language and date aspects defined in the Akoma Ntoso naming convention standard.

For example, this request will fetch the HTML of the English expression of Act 55 of 1998, as amended on 2014-01-17:

```
GET /api/v2/akn/za/act/1998/55/eng@2014-01-17.html
```

The available expressions of a work are listed in the `points_in_time` field of the JSON description of the work. Each point in time includes a date and a list of expressions available at that date, one for each available language.

You can use the following date formats to request different expressions of a work.

Date Format	Meaning	Example Expression FRBR URI
`@`	Very first expression of a work.	`/akn/za/act/1998/55/eng@`
`@YYYY-MM-DD`	Expression at the specific date.	`/akn/za/act/1998/55/eng@2014-01-17`
`:YYYY-MM-DD`	Most recent expression at or before a date.	`/akn/za/act/1998/55/eng:2015-01-01`
(none)	The most recent expression at or before today's date. Equivalent to using `:` with today's date.	`/akn/za/act/1998/55/eng`

The `.format` part of the FRBR URI is placed after the `@YYYY-MM-DD` part.

Note: If you use `@` to specify a particular date and the API doesn't have a version at exactly that date, it will return a 404 response. If you need the expression of the work closest to a particular date, use `:` instead.

1.5.12 Table of Contents

```
GET /api/v2/frbr-uri/toc.json
```

- Content types: JSON

Get a description of the table of contents (TOC) of an act. This includes the chapters, parts, sections and schedules that make up the act, based on the structure captured by the Indigo editor.

Each item in the table of contents has this structure:

```
{
  "id": "chapter-1",
  "type": "chapter",
  "num": "1",
  "heading": "Interpretation",
  "title": "Chapter 1 - Interpretation",
  "component": "main",
```

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```
  "subcomponent": "chapter/1",
  "url": "http://indigo.example.com/api/v2/akn/za/act/1998/10/eng/main/chapter/1",
  "children": [ "..." ]
}
```

Each of these fields is described in the table below.

Field	Description	Type
id	The unique XML element id of this item. (optional)	String
type	The Akoma Ntoso element name of this item.	String
num	The number of this item, such as a chapter, part or section number. (optional)	String
heading	The heading of this item (optional)	String
title	A derived, friendly title of this item, taking `num` and `heading` into account and providing good defaults if either of those is missing.	String
component	The component of the Akoma Ntoso document that this item is a part of, such as `main` for the main document, or `schedule1` for the first schedule.	String
subcomponent	The subcomponent of the component that this item is a part of, such as a chapter. (optional)	String
url	The API URL for this item, which can be used to fetch XML, HTML and other details of just this part of the document.	String
children	A possibly-empty array of TOC items that are children of this item.	Array

1.5.13 Fetching Parts, Chapters and Sections

You can use the `url` field from an item in the table of contents to fetch the details of just that item in various forms.

```
GET /api/v2/frbr-uri/toc-item-uri.format
```

- Content types: XML, HTML, PDF, ePUB, ZIP

1.5.14 Using HTML Responses

Indigo transforms Akoma Ntoso XML into HTML5 content that looks best when styled with Indigo Web stylesheets. You can link to the stylesheets provided by that package, or you can pull them into your website.

1.5.15 Listing Works

```
GET /api/v2/akn/za/
GET /api/v2/akn/za/act/
GET /api/v2/akn/za/act/2007/
```

- Content types: JSON, PDF, EPUB, ZIP

These endpoints list the works for a country or year. To list the available works for a country you'll need the two-letter country code for the country.

The listings include the most recent applicable expressions of each work, in the country's default language.

1.5.16 Search

```
GET /api/v2/search/<country>?q=<search-term>
```

- Where <*country*> is a two-letter country code
- Parameter `q`: the search string
- Content types: JSON

This API searches for works in a country. It returns all works that match the search term in either their title or their body. Results are returned in search rank order. Each result also has a numeric `_rank` and an HTML `_snippet` with highlighted results.

If more than one expression of a particular work matches the search, then only the most recent matching expression is returned.

1.6 Customising Indigo

This documentation explains how to make customise and build upon Indigo.

In particular, Indigo is setup to be customisable for different countries, localities, languages and legal traditions.

Note: This documentation assumes you're familiar with developing Python and Django applications.

1.6.1 Plugins

Indigo uses plugins to allow specific functionality to be customised for different countries, localities and languages. For example, extracting a Table of Contents and automatically linking references both use the plugin system. This means they can be adjusted to suite different languages and references styles.

Locales

Most plugins are locale-aware. That is, Indigo looks for a plugin implementation that best matches the locale of a work or a document.

The locale is a tuple of strings `(country, language, locality)`, such as `('za', 'eng', None)`, where `None` is a wildcard that will match anything. The tuple describes the locales to which the plugin applies. In this example, the plugin applies to any work in South Africa (`za`) with an English (`eng`) expression, and will match on any locality within South Africa (the last `None` item).

If there are multiple plugins with locales that match a document or work, Indigo will use the one that most specifically matches it (ie. has the fewest number of wildcards.)

Plugin Registry

Plugins register themselves with the plugin registry for a certain topic. The following plugin topics are understood by Indigo:

- `importer` plugins import text from documents and mark them up with Akoma Ntoso. Usually extend *`indigo_api.importers.base.Importer`*.

- `publications` plugins provide publication documents for works. Usually extend *indigo.analysis.publications.base.BasePublicationFinder*.
- `refs` plugins automatically identify and markup references between works in the text of a document. Usually extend *indigo.analysis.refs.base.BaseRefsFinder*.
- `terms` plugins automatically identify and markup defined terms in document markup. Usually extend *indigo.analysis.terms.base.BaseTermsFinder*.
- `toc` plugins return a Table of Contents from document markup. Usually extend *indigo.analysis.toc.base.TOCBuilderBase*.
- `work-detail` plugins return tradition-specific information for a work, such as numbered titles. Usually extend *indigo.analysis.work_detail.base.BaseWorkDetail*.

Register a plugin using `plugins.register(topic)` and include a `locale` that describes which locales your plugin is specific to:

```
from indigo.analysis.work_detail.base import BaseWorkDetail
from indigo.plugins import plugins


@plugins.register('work-detail')
class CustomisedWorkDetail(BaseWorkDetail):
    locale = ('za', 'afr', None)
    ...
```

Fetching a Plugin

You can fetch a plugin for a work or a document using *for_work()*, *for_document()*, or *for_locale()* on the plugin registry, giving it a plugin topic and a work, document or locale:

```
from indigo.plugins import plugins

toc_builder = plugins.for_document('toc', document)
if toc_builder:
    toc_builder.table_of_contents_for_document(document)
```

Custom Tasks

You can also create custom tasks using the plugin system. Custom tasks can provide specific URLs for performing the task, control who can close a task, etc.

Indigo recognises a custom task using the `Task.code` attribute on the task. This is an arbitrary string value which you provide when you register your custom task with the registry.

Like plugins, tasks are also locale-specific so you can provide locale-dependent implementations. More than one custom task can be registered for the same task code. Indigo will use the implementation with the closest locale match.

Register your task with the task system like this:

```
from indigo.custom_tasks import CustomTask, tasks

@tasks.register('my-custom-code')
class MyCustomTask(CustomTask):
    locale = (None, None, None)
```

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```
    def setup(self, task):
        self.task = task
```

When Indigo sees a task with a task `code` attribute, it will lookup the custom task from the registry, create an instance, and call `setup(task)` with the `task` instance.

Loading Plugins and Custom Tasks

It's common to place your plugins in `plugins.py` and custom tasks in `custom_tasks.py` in your project directory. Then load those files in your Django `apps.py` when Django calls your app's `ready()` method:

```
from django.apps import AppConfig


class MyAppConfig(AppConfig):
    name = 'my_app'

    def ready(self):
        # ensure our plugins are pulled in
        import my_app.plugins
        import my_app.custom_tasks
```

Plugin API Reference

class `indigo_api.importers.base.`**`Importer`**

Import from PDF and other document types using Slaw.

Slaw is a commandline tool from the slaw Ruby Gem which generates Akoma Ntoso from PDF and other documents. See https://rubygems.org/gems/slaw

`analyse_after_import`(*doc*)
: Run analysis after import. Usually only used on PDF documents.

`create_from_docx`(*docx_file*, *doc*)
: We can create a mammoth image handler that stashes the binary data of the image and returns an appropriate img attribute to be put into the HTML (and eventually xml). Once the document is created, we can then create attachments with the stashed image data, and set appropriate filenames.

`create_from_pdf`(*upload*, *doc*)
: Import from a PDF upload.

`create_from_upload`(*upload*, *doc*, *request*)
: Create a new Document by importing it from a `django.core.files.uploadedfile.UploadedFile` instance.

`cropbox = None`
: Crop box to import within, as [left, top, width, height]

`expand_ligatures`(*text*)
: Replace ligatures with separate characters, eg. -> fi.

`fragment = None`
: The name of the AKN element that we're importing, or None for a full act.

`fragment_id_prefix = None`
: The prefix for all ids generated for this fragment

import_from_text(*input*, *frbr_uri*, *suffix=u"*)
Create a new Document by importing it from plain text.

locale = (None, None, None)
Locale for this analyzer, as a tuple: (country, language, locality). None matches anything.

reformat = False
Should we tell Slaw to reformat before parsing? Only do this with initial imports.

reformat_text(*text*)
Clean up extracted text before giving it to Slaw.

section_number_position = u'before-title'
By default, where do section numbers usually lie in relation to their title? One of: `before-title`, `after-title` or `guess`.

slaw_grammar = u'za'
Slaw grammar to use

tempfile_for_upload(*upload*)
Uploaded files might not be on disk, ensure it is by creating a temporary file.

use_ascii = True
Should we pass –ascii to slaw? This can have significant performance benefits for large files. See https://github.com/cjheath/treetop/issues/31

class indigo.analysis.publications.base.**BasePublicationFinder**
This finds publication details for a published document. For example, a country-specific implementation can lookup a Government Gazette given a date, gazette name, and number.

find_publications(*params*)
Return a list of publications matching the given params, a dict of arbitrary key-value pairs.

locale = (None, None, None)
The locale this finder is suited for, as `(country, language, locality)`.

class indigo.analysis.refs.base.**BaseRefsFinder**
Finds references to Acts in documents.

Subclasses must implement *find_references_in_document*.

act_re = None
This must be defined by a subclass. It should be a compiled regular expression, with named captures for *ref*, *num* and *year*.

find_references_in_document(*document*)
Find references in +document+, which is an Indigo Document object.

make_href(*match*)
Turn this match into a full FRBR URI href

make_ref(*match*)
Make a reference out of this match, returning a (ref, start, end) tuple which is the new ref node, and the start and end position of what text in the parent element it should be replacing.

By default, the first group in the *act_re* is substituted with the ref.

class indigo.analysis.terms.base.**BaseTermsFinder**
Finds references to defined terms in documents.

Subclasses must implement *find_terms_in_document*.

add_terms_to_references(*doc*, *terms*)
Add defined terms to the references section of the XML.

build_tlc_term(*parent*, *id*, *term*)
Build an element such as <TLCTerm id="term-applicant" href="/ontology/term/this.eng.applicant" showAs="Applicant"/>

definition_sections(*doc*)
Yield sections (or other basic units) that potentially contain definitions of terms.

find_definitions(*doc*)
Find *def* elements in the document and return a dict from term ids to the text of the term.

find_term_references(*doc*, *terms*)
Find and decorate references to terms in the document. The +terms+ param is a dict from term_id to actual term.

find_terms_in_document(*document*)
Find defined terms in +document+, which is an Indigo Document object.

guess_at_definitions(*doc*)
Find defined terms in the document, such as:

> "this word" means something…

It identifies "this word" as a defined term and wraps it in a def tag with a refersTo attribute referencing the term being defined. The surrounding block structure is also has its refersTo attribute set to the term. This way, the term is both marked as defined, and the container element with the full definition of the term is identified.

mark_definition(*container*, *term*, *start_pos*, *end_pos*)
Update the container node to wrap the given term in a definition tag.

renumber_terms(*doc*)
Recalculate ids for <term> elements

class `indigo.analysis.toc.base.`**TOCBuilderBase**
This builds a Table of Contents for an Act.

A Table of Contents is a tree of `TOCElement` instances, each element representing an item of interest in the Table of Contents. Each item has attributes useful for presenting a Table of Contents, such as a type (chapter, part, etc.), a number, a heading and further child elements.

The TOC is assembled from certain tags in the document, see `toc_elements`.

The Table of Contents can also be used to lookup the XML element corresponding to an item in the Table of Contents identified by its subcomponent path. This is useful when handling URIs such as `.../eng/main/section/1` or `.../eng/main/part/C`. See `cobalt.act.Act.get_subcomponent()`.

Some components can be uniquely identified by their type and number, such as `Section 2`. Others require context, such as `Part 2 of Chapter 1`. The latter are controlled by `toc_non_unique_elements`.

determine_component(*element*)
Determine the component element which contains +element+.

friendly_title(*item*)
Build a friendly title for this, based on heading names etc.

locale = (None, None, None)
The locale this TOC builder is suited for, as `(country, language, locality)`.

process_elements(*component*, *elements*, *parent=None*)
Process the list of `elements` and their children, and return a (potentially empty) set of TOC items.

table_of_contents(*act*, *language*)
Get the table of contents of `act` as a list of `TOCElement` instances.

`table_of_contents_entry_for_element`(*document*, *element*)
: Build the table of contents entry for an element from a document.

`table_of_contents_for_document`(*document*)
: Build the table of contents for a document.

`titles = {}`
: Dict from toc elements (tag names without namespaces) to functions that take a `TOCElement` instance and return a string title for that element.

  Include the special item *default* to handle elements not in the list.

`toc_elements = [u'coverpage', u'preface', u'preamble', u'part', u'chapter', u'section'`
: Elements we include in the table of contents, without their XML namespace. Subclasses must provide this.

`toc_non_unique_components = [u'chapter', u'part']`
: These TOC elements (tag names without namespaces) aren't numbered uniquely throughout the document and will need their parent components for context. Subclasses must provide this.

class `indigo.analysis.work_detail.base.`**`BaseWorkDetail`**
: Provides some locale-specific work details.

  Subclasses should implement *work_numbered_title*.

  `work_friendly_type`(*work*)
  : Return a friendly document type for this work, such as "Act" or "By-law".

  `work_numbered_title`(*work*)
  : Return a formatted title using the number for this work, such as "Act 5 of 2009". This usually differs from the short title. May return None.

class `indigo.analysis.work_detail.base.`**`BaseWorkDetail`**
: Provides some locale-specific work details.

  Subclasses should implement *work_numbered_title*.

  `work_friendly_type`(*work*)
  : Return a friendly document type for this work, such as "Act" or "By-law".

  `work_numbered_title`(*work*)
  : Return a formatted title using the number for this work, such as "Act 5 of 2009". This usually differs from the short title. May return None.

class `indigo.plugins.`**`LocaleBasedRegistry`**
: Base class for locale-based registries. Helps register and lookup locale-based classes.

  `for_document`(*topic*, *document*)
  : Find an appropriate helper for this document.

  `for_locale`(*topic*, *country=None*, *language=None*, *locality=None*)
  : Find an appropriate importer for this locale description. Tightest match wins.

  `for_work`(*topic*, *work*)
  : Find an appropriate helper for this work.

  `register`(*topic*, *name=None*)
  : Class decorator that registers a new class with the registry.

  `registry = None`
  : Registry of class names to classes. Subclasses MUST define this to avoid sharing registry classes.

1.7 Changelog

1.7.1 3.0 (5 July 2019)

This is the first major release of Indigo with over a year of active development. Upgrade to this version by installing updated dependencies and running migrations.

- FEATURE: Support images in documents
- FEATURE: Download as XML
- FEATURE: Annotations/comments on documents
- FEATURE: Download documents as ZIP archives
- FEATURE: You can now highlight lines of text in the editor and transform them into a table, using the Edit > Insert Table menu item.
- FEATURE: Edit menu with Find, Replace, Insert Table, Insert Image, etc.
- FEATURE: Presence indicators for other users editing the same document.
- FEATURE: Assignable tasks and workflows.
- FEATURE: Social/oauth login supported.
- FEATURE: Localisation support for different languages and legal traditions.
- FEATURE: Badge-based permissions system
- FEATURE: Email notifications
- FEATURE: Improved diffs in document and work version histories
- FEATURE: Batch creation of works from Google Sheets
- FEATURE: Permissions-based API access
- FEATURE: Attach publication documents to works
- FEATURE: Measure work completeness
- BREAKING: Templates for localised rendering have moved to `templates/indigo_api/akn/`
- BREAKING: The LIME editor has been removed.
- BREAKING: Content API for published documents is now a separate module and versioned under `/v2/`
- BREAKING: Some models have moved from `indigo_app` to `indigo_api`, you may need to updated your references appropriately.

1.7.2 2.0 (6 April 2017)

- Upgraded to Django 1.10
- Upgraded a number of dependencies to support Django 1.10
- FEATURE: significantly improved mechanism for maintaining amended versions of documents
- FEATURE: you can now edit tables directly inline in a document
- FEATURE: quickly edit a document section without having to open it via the TOC
- FEATURE: support for newlines in tables
- FEATURE: improved document page layout

- FEATURE: pre-loaded set of publication names per country
- Assent and commencement notices are no longer H3 elements, so PDFs don't include them in their TOCs. #28
- FIX: bug when saving an edited section
- FIX: ensure TOC urls use expression dates
- FIX: faster document saving

After upgrading to this version, you **must** run migrations:

```
python manage.py migrate
```

We also recommend updating the list of countries:

```
python manage.py update_countries_plus
```

1.7.3 1.1 (2016-12-19)

- First tagged release

CHAPTER 2

Documents

A **document** is the primary data type in the platform. It represents a single version of a legislation document such as an act. It contains metadata such as a title, year of publication, country as well as content in Akoma Ntoso XML.

The Akoma Ntoso standard uses an FRBR URI to uniquely identify an item of legislation. For example, the URI

```
/za/act/1998/84
```

identifies the National Forests Act 84 of 1998. The components indicate that the document is from South Africa (`za`), is an `act` and is act number `84` to be published in `1998`. These URIs have a standard format and are well-known and so can be guessed. This is useful when an external system wants to ask us about an act.

See also:

For more details on FRBR URIs, see http://www.akomantoso.org/docs/akoma-ntoso-user-documentation/metadata-describes-the-content

Every Indigo document has an FRBR URI associated with it which is used to identify it in the public REST API.

Every Indigo document also has a uinque numeric identifier `id`. This is assigned by the platform and is unique to that document.

A new document is created each time a new **amendment** must be applied to an existing document. A single piece of legislation that has been amended over time is comprised of multiple separate documents, one for each amendment. Each amended version of the document has a different `id`, but the same URI.

The **application API** uses the numeric IDs to identify documents so that it can handle deleted documents, draft documents and amended documents with the same URI.

The **public API** uses the FRBR URI to identify documents so that anyone can find a document just by constructing a valid FRBR URI.

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