Building BCH – Aware websites

BCH AJAX Plug-In Users' Guide

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.

Contents

List of Figures

List of Tables

List of Acronyms and Abbreviations

AJAX   Asynchronous JavaScript And XML
BCH   Biosafety Clearing-House
GEF   Global Environment Facility
nBCH   National BCH
SCBD   Secretariat of the Convention on Biodiversity
UNEP   United Nations Environment Programme

1. Introduction to the Manual

What you will learn in this manual:
This training manual describes in detail the guidelines about using Ajax Plug-in to develop and maintain a National BCH application

Context:
The UNEP-GEF Project for Capacity Building for Effective Participation in the Biosafety Clearing-House (BCH-I), in collaboration with the Secretariat of the Convention on Biological Diversity (SCBD), prepared a modular training package aimed at providing a practical "how-to" guide for countries to assist them in learning, understanding, using, and setting up national access to the BCH. The training package was later updated within the UNEP-GEF Project for Continued Enhancement of Capacity Building for Effective Participation in the BCH (BCH-II). It was designed to be flexible and is tailored to meet the diverse needs of different countries, allowing them to select those tools that are most useful to their situation, needs and priorities. The training package is divided into several manuals, each addressing one element of the BCH..

Audience:
This manual is designed to provide guidance to administrators and developers of any kind of websites that wish to easily include information from the BCH in them.

Purpose:
This manual describes in detail the guidelines and step by step process about using AJAX Plug-In for displaying BCH information in existing websites.

2. The BCH AJAX Plug-In

2.1. Overview

The Secretariat to the Convention on Biological Diversity (SCBD) has developed an application tool called *"BCH AJAX Plug-in"* which is ready to be used by any web developer, (and particularly the countries when building websites that wish to include BCH-registered information). It is a lightweight JavaScript plugin based on AJAX technology that can be easily integrated to any website to allow dynamic display of information from the BCH Central Portal.

The use of the BCH AJAX Plug-In does not require any specific IT knowledge. The Plug-In works on all server platforms and does not require any software installation. All required files are located on the BCH Central Portal and maintained by the Secretariat.

The BCH AJAX Plug-In is a client side application. The connection to the BCH Central Portal is made directly by the client (end-user).

2.2. Compatibility

The Secretariat fully supports the following browsers versions:
- Internet Explorer 8+
- Mozilla Firefox 3.5+
- Google Chrome
- Safari 4+

It must also be noted that support for JavaScript must be enabled for the BCH AJAX Plug-In to work.

2.3. Maintenance

The BCH AJAX Plug-In is fully supported and maintained by the Secretariat. As all files are located on the BCH Central Portal, there is no need for maintenance at the local level.

2.4. Integration

The BCH AJAX Plug-In has been designed to make its integration to any website as simple as possible. It can be integrated to any webpage by simply adding the following lines of HTML. Figure 1 shows a usage example of this plugin, to display national focal points from Canada, in English:

```
<script type="text/javascript" charset="utf-8"
src="http://bch.biodiv.org/centralportal/ui/offsite/bch-
offsite.js"></script>
<script type="text/javascript" charset="utf-8" >
GenerateRecords("focalPoint", "ca", "en");</script>
```

Figure 1.   Sample of an AJAX Plug-In.

Figure 2 is a very basic HTML page integrating the BCH AJAX Plug-In.

```
<html>
 <body>
<h1>National Focal Points</div>
 <script type="text/javascript" charset="utf-8"
 src="http://bch.biodiv.org/centralportal/ui/offsite/bch-offsite.js"></script>
<script type="text/javascript" charset="utf-8" >
 GenerateRecords("focalPoint", "ca", "en");</script>


 </body
</html>
```

Figure 2. AJAX Plug-In integrated into a basic web page.

And the next figure shows the results of displaying this html page:

Figure 3 display of previous html page

2.5. Ajax simple demo application

In order to help potential users to understand how to use and integrate the BCH Ajax plug in html webpages, a simple demo website has been developed. It is freely available at **http://bch.cbd.int/help/topics/ajaxdemo/**

Once started, the website looks initially like **Figure 4**.
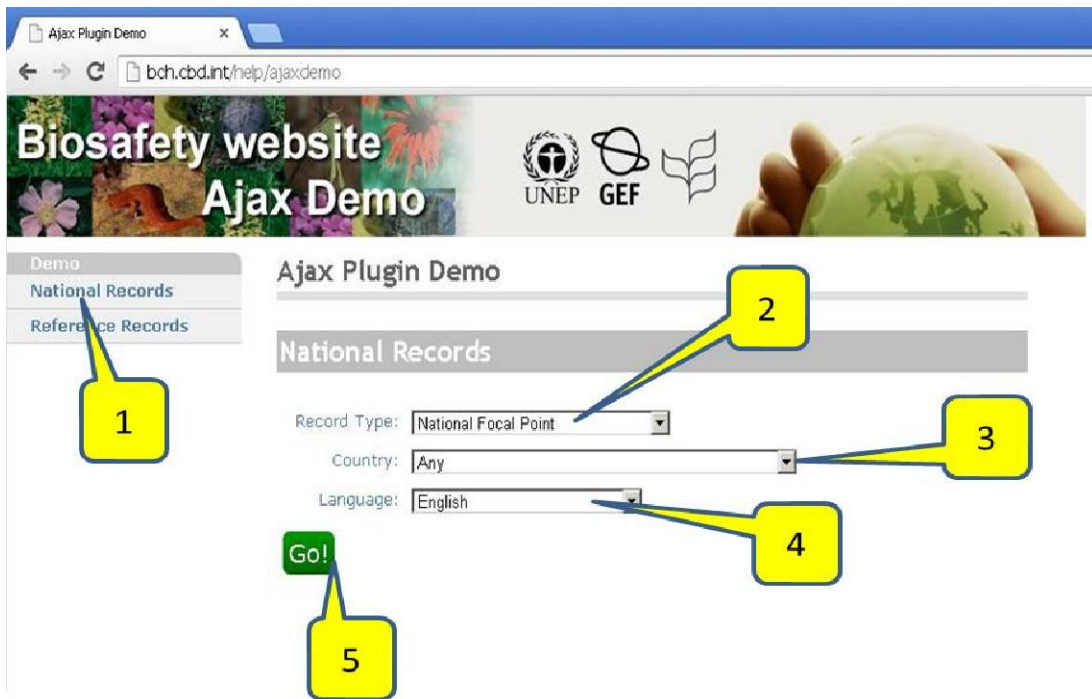
Figure 4 Ajax demo application

The following controls are available in the main screen:
1. Select national or reference records
2. Select type of record or "Any" (see Note)
3. Select country or "Any" for all countries (see Note)
4. Select record language
5. Press to see the query and its results

NOTE: "Any" cannot be used at the same time for record type and country

Once the type of records, country and languages have been selected, clicking on "Go" will generate and execute the script. The generated script will be showed in a text box, and the records retrieved will be displayed below.

Figure 5 Generated AJAX script and retrieved records

2.6. Customization

The BCH AJAX Plug-In can be easily customized to show any specific type of BCH national information for any country, or BCH reference information. To do this, the parameters of the **GenerateRecords** (**Figure 6**) method must be specified.

```
function GenerateRecords(documentType, country, language);
```

Figure 6. Parameters used in the BCH AJAX Plug-In.

2.6.1. Document Type

This parameter specifies what type of BCH national information to display. **Table 1** and **Table 2** show the valid values for this parameter:

Type of information to display National Records	Value
National Focal Point	focalPoint
Competent National Authority	Authority
National Database	nationalDatabase
Law, Regulation or Guideline	Law
Agreement or Arrangement	Agreement
Decision on LMO	decisionUnderAIA
Decision on LMO-FFP	decisionUnderA11
Other Decision	Decision
Biosafety Expert	biosafetyExpert
Report on Assignment	biosafetyExpertAssignmentReport
Capacity Building Opportunity	capacityBuildingOpportunity
Capacity Building Project	capacityBuildingProject
Capacity Building Need or Priority	countryNeedsAndPriorities
Risk Assessment	riskAssessment
Second National Report in the implementation of CPB	nationalreport2

Table 1 Value of the type of information to be displayed – national records

Type of information to display Reference Records NOTE: Country code must be set to "*"	Value
BCH news	news
Biosafety Information Resource Centre	birc
Organism Registry	organism
Gene and DNA Sequence Registry	dnasequence
Living Modified Organism (LMO) Registry	modifiedorganism
Organizations involved in Biosafety Activities	organization
Laboratory for detection and identification of LMOs (a subset of Organizations)	lmodetectionlaboratory

Table 2 Value of the type of information to be displayed – reference records

Using the Ajax demo application you can select the type of records to search and display, as shown in **Figure 7** and **Figure 8**. If "Any" selected, all types of records from the specified country will be retrieved.

NOTE: "Any" cannot be used at the same time for record type and country
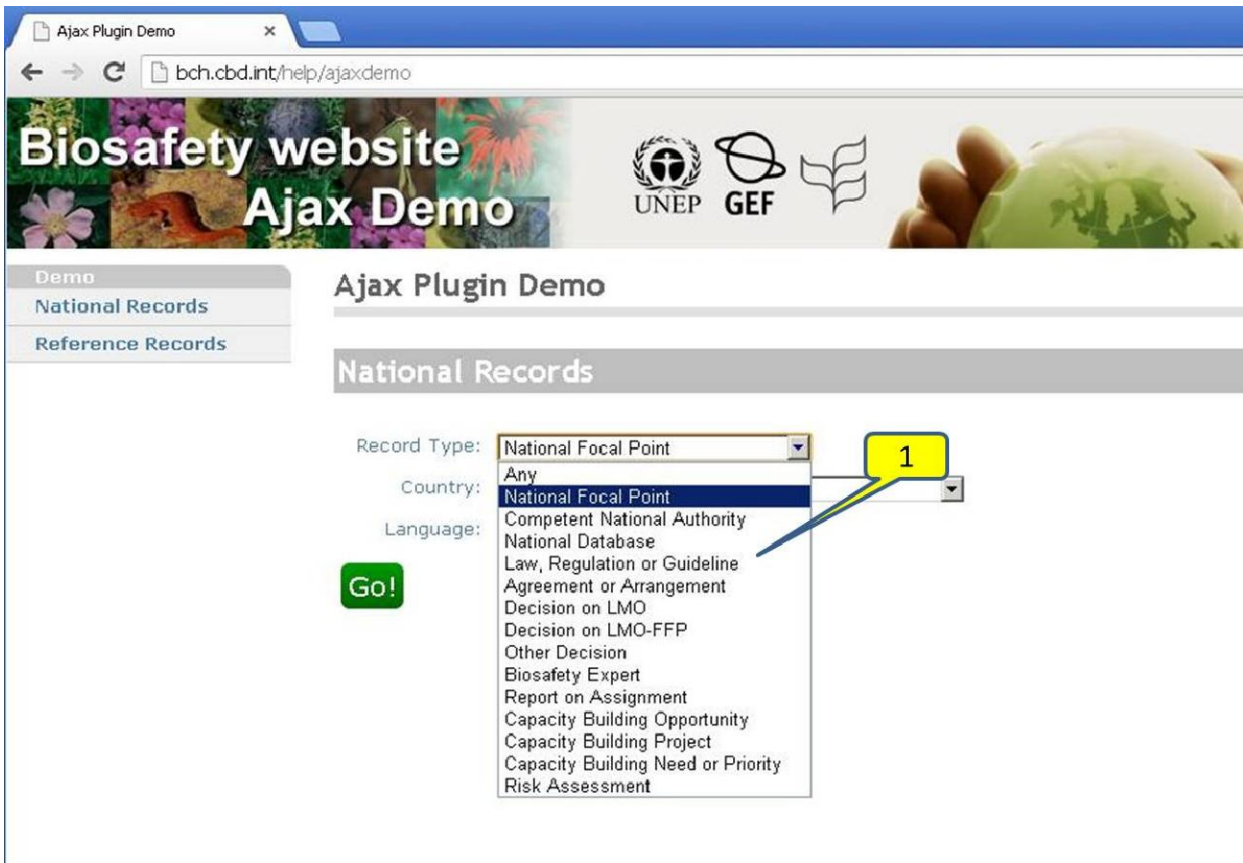
Figure 7 Selecting a National record type

Figure 8 Selecting a Reference record type

2.6.2. Country

The parameter specifies the country for which the information is displayed. The BCH AJAX Plug-In uses 2-letter ISO 3166 country codes. Annex 1 contains a list of such codes, which can also be retrieved at any moment from

http://www.iso.org/iso/country_codes/iso_3166_code_lists/country_names_and_code_elements.htm

Using the Ajax demo application you can select the Country which records to search and display, as shown in **Figure 9**. If "Any" selected, records of the specified type will be retrieved for all countries:
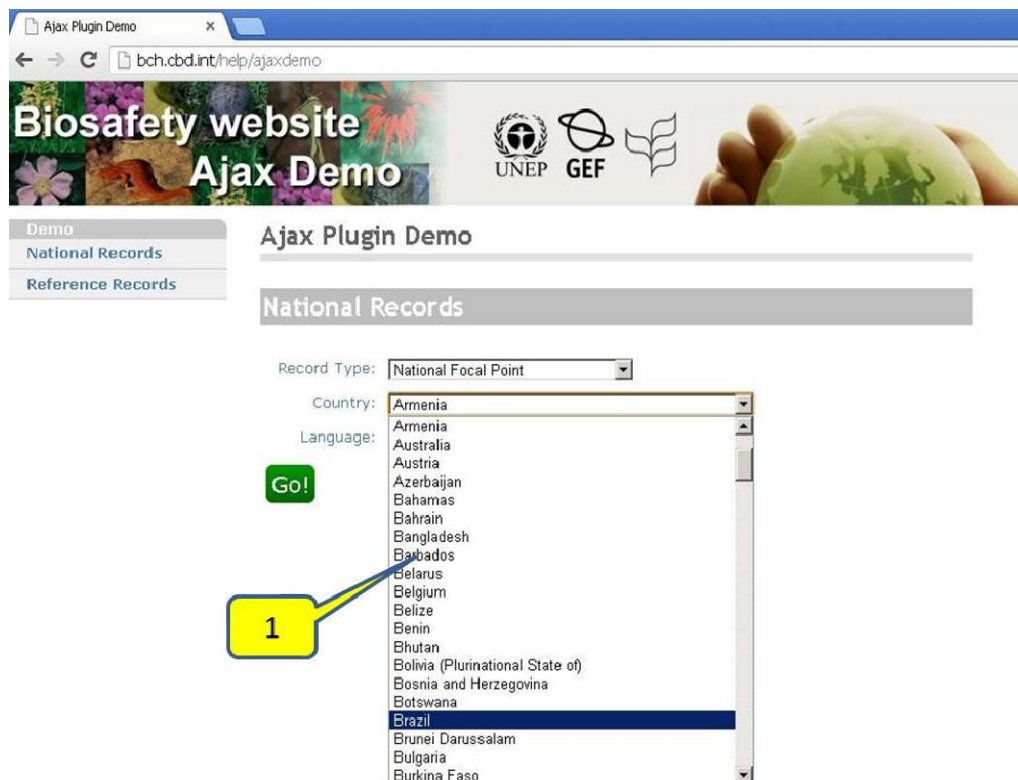
Figure 9 Selecting country

NOTE: "Any" cannot be used at the same time for record type and country

2.6.3.   Language

This parameter specifies in which language the information should be displayed. The BCH AJAX Plug-In is not limited to the 6 UN languages. The latest version of BCH Central Portal allows the country-users to select other languages aside from the 6 UN official languages when registering information. At the Management Centre section of the BCH Central Portal, additional language can be selected by clicking on the "Select Languages" button (Figure 10).
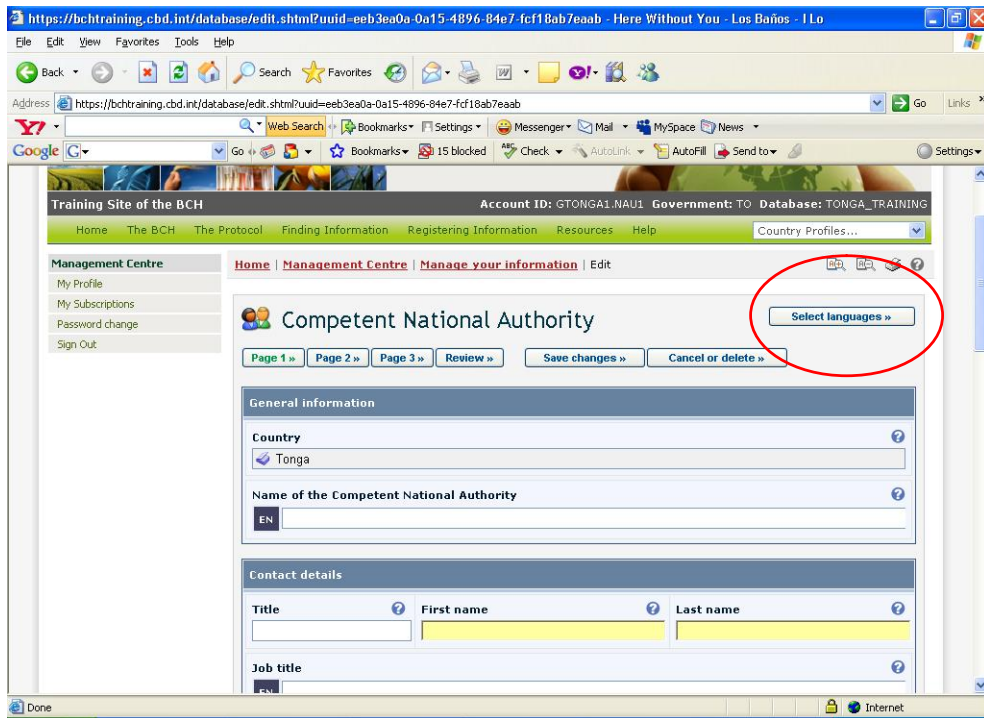
Figure 10. The "Select Language" Button, BCH Management Centre

A drop-down list of additional languages is available and one or more languages can be selected (
Figure 11).
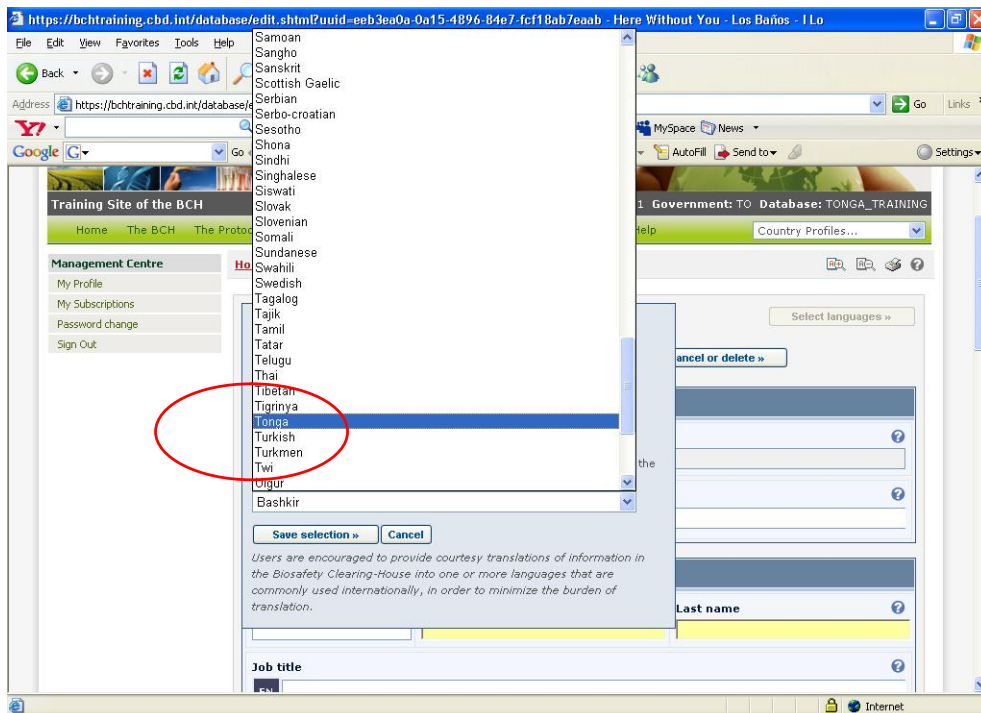
Figure 11.   "Additional Languages" drop down list from BCH Management Centre.

After that, the authorized users can register information on the BCH portal in both the UN language(s) of choice and other one(s) (Figure 12).
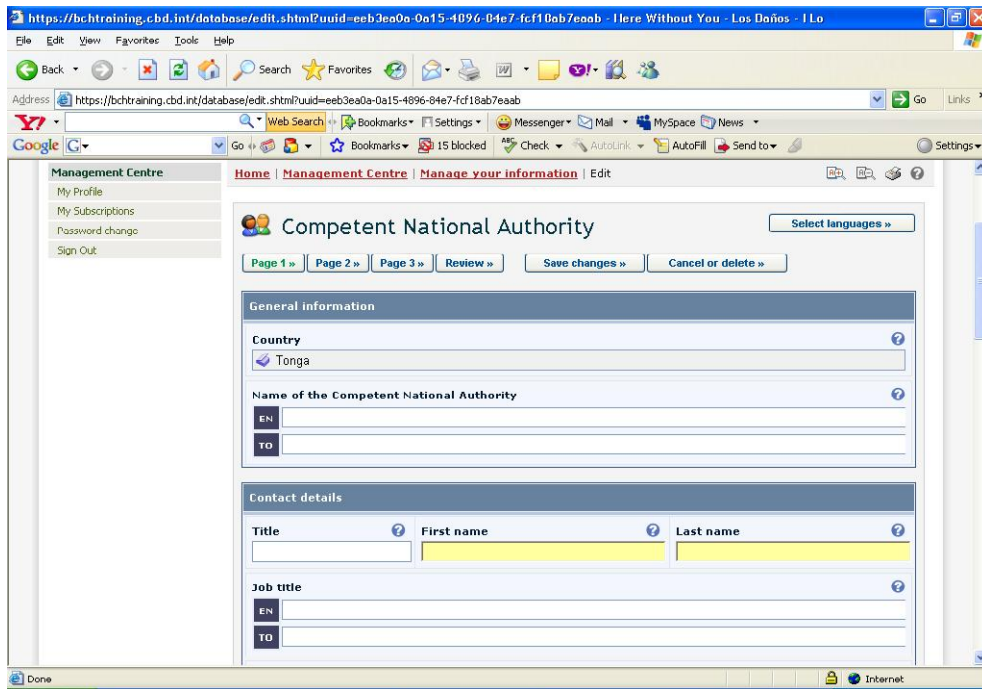
Figure 12. Registering Information with Official UN Language and another additional Language.

The complete list of language codes that can be used for this parameter, can be found at: http://www.loc.gov/standards/iso639-2/php/English_list.php

Using the Ajax demo application you can select the language, as shown in Figure **13**.
Note that the first rows list the UN official languages.

Figure 13 Selecting language
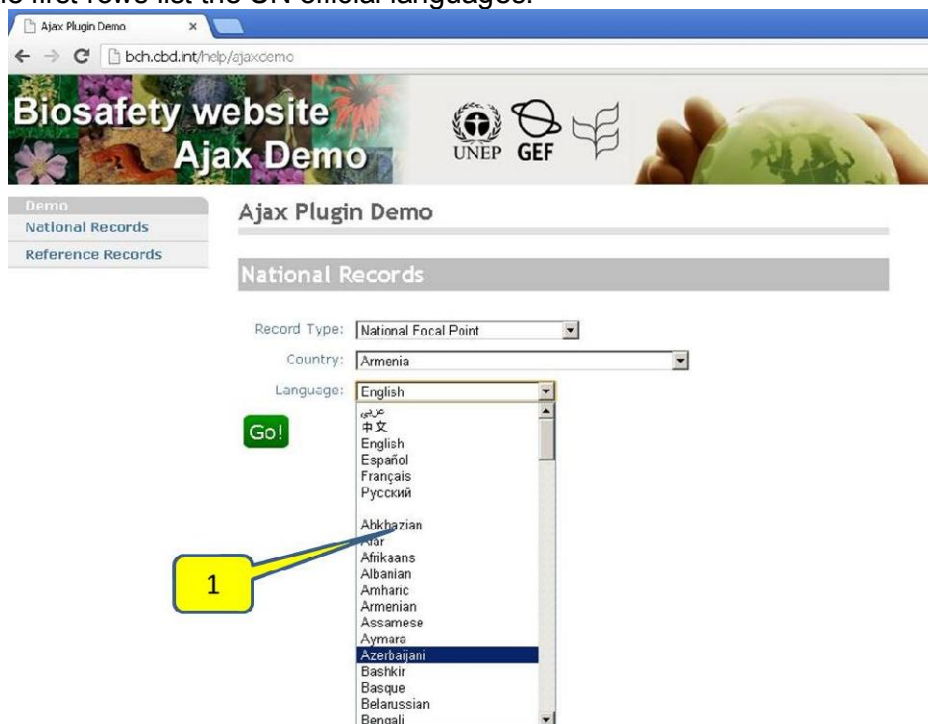
3. Embedding the JavaScript and AJAX Plug-In

What you will learn in this section:
The JavaScript and AJAX Plugin formats.
Where to place the JavaScript and AJAX Plugins

3.1. Embedding the JavaScript

JavaScript is important to make the AJAX Plug-In work. The webpage (regardless of format – html, php, asp, etc.) where your front-end is (where information will be displayed) shall contain the following lines:

```
<script type="text/javascript" charset="utf-8"
src="http://bch.biodiv.org/centralportal/ui/offsite/bch-offsite.js">
</script>
```

Figure 14. Sample JavaScript.

Now where do we put the JavaScript?

Generally, JavaScript can be placed within the head or body section or can be declared as an external script. If you want the script to be executed when it is called or when a user triggers an event, put the script in the head section.

```
<html>
<head>
    <script type="text/javascript" charset="utf-8"
    src="http://bch.biodiv.org/centralportal/ui/offsite/bch-offsite.js">
    </script>
 </head>
```

Figure 15. Embedding the JavaScript within the head tags.

For JavaScript that needs to be executed immediately while the page loads into the browser, put it in the body section.

```
<html>
<head>
</head>
<body>
    <script type="text/javascript" charset="utf-8"
    src="http://bch.biodiv.org/centralportal/ui/offsite/bch-offsite.js">
    </script>
 </body>
```

Figure 16. Embedding the JavaScript within the body section.

The external script is recommended if you want to run the same JavaScript on several pages without having to write the same script on every page. The JavaScript is written in an external file and saved with a ".**js**" file extension.

To use the external script, point to the .js file in the "src" attribute of the <script> tag:

```
<html>
<head>
<script src="external.js"></script>
</head>
<body>
 </body>
</html>
```

Figure 17. JavaScript written in an external file.

3.2. Integrating the AJAX Plug-In

After declaring the JavaScript, we are now ready to integrate the following AJAX Plug-In:

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("documentType", "countryCode", "language");
 </script>
```

Figure 18. AJAX Plug-In to be integrated.

where "*documentType*" is the value of the type of information to be displayed (see section 2.6.1, **Table 1** and **Table 2**), "*countryCode*" is the 2-letter ISO 3166 country code (see section 2.6.2); and "*language*" is the code which specifies in which language the information should be displayed (see section 2.6.3.)

To illustrate, let us consider the different available documents in India. First, we generate the country profile of India.

Figure 19. Country profile of India generated from the BCH Portal.

Then, we check for available information on India. Based from the generated page, the types of document available information on India can be seen looking in "country profiles" (**Figure 20**)

Figure 20.   Types of document available in India.

To display the abovementioned information on an already existing website, the following AJAX Plug-Ins could be used:

- For the National Focal Points

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("focalPoint ", "IN", "en");
 </script>
```

- Competent National Authority

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("Authority", "IN", "en");
 </script>
```

- National Biosafety Website or Database

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("nationalDatabase", "IN", "en");
 </script>
```

- Law, Regulation or Guidelines

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("Law", "IN", "en");
 </script>
```

- Country decisions under AIA:

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("decisionUnderAIA ", "IN", "en");
 </script>
```

- Country decisions for FFP:

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("decisionUnderA11", "IN", "en");
 </script>
```

- Country risk assessments:

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("riskAssessment ", "IN", "en");
</script>
```

The AJAX demo application can be used to easily select the types of records, countries and languages, generate the required script, copy and insert it in the developed website. Example: searching the Competent National Authorities of India:

Figure 21 using the Ajax demo app to generate and run an Ajax script

3.3. Usage of wildcards and combined parameters.

The *"documentType"* and *"country"* parameters accept the usage of wildcards ("*" or "*all*"), and the possibility to specify more than one value (separated with comma ','
Please note that **it is not possible** to use wildcards simultaneously on "documentType" AND "country".
Examples:

- Focal Points and Authorities for Canada and United States in English:

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("focalPoint,authority", "ca,us", "en");
 </script>
```

- Focal Points of all countries in Spanish:

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("focalPoint ", "*", "es");
 </script>
```

- All records from United Kingdom in English:

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("* ", "uk", "en");
 </script>
```

- All records from France, in French language:

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords("* ", "fr", "fr");
 </script>
```

- All BCH registered Risk Assessments, in English:

```
<script type="text/javascript" charset="utf-8" >
GenerateRecords ("riskAssessment", "*", "en ");
 </script>
```

3.4. Search within results

Once the script has been executed and the results have been retrieved, the AJAX plugin offers a BCH Central Portal standard feature: "search within results". See Figure 22.
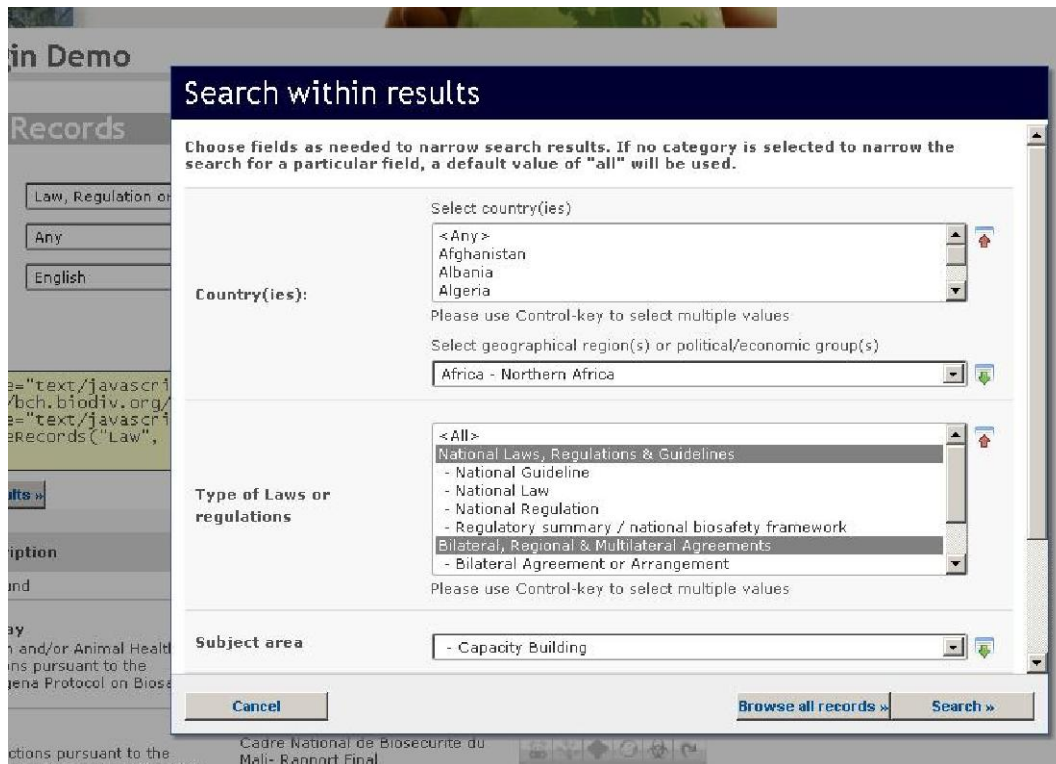
Figure 22 Search within results feature

3.5. Comments on searching reference records

Several types of reference records cannot be associated with a particular country. For these kinds of records, the country parameter shall be set to **"*"** (asterisk).

This applies to the following record types:

- birc   Biosafety Information Resource Centre
- organism   Organism Registry
- dnasequence   Gene and DNA Sequence Registry
- modifiedorganism   Living Modified Organism (LMO) Registry
- organization   Organizations involved in Biosafety Activities
- lmodetectionlaboratory   Laboratory for detection and identification of LMOs
                                 (a subset of Organizations)

Annex 1. ISO 3166 Country codes

Table 3 ISO 3166 two-letter country code.

Country names	ISO 3166-1-alpha-2 code
A	
AFGHANISTAN	AF
ÅLAND ISLANDS	AX
ALBANIA	AL
ALGERIA	DZ
AMERICAN SAMOA	AS
ANDORRA	AD
ANGOLA	AO
ANGUILLA	AI
ANTARCTICA	AQ
ANTIGUA AND BARBUDA	AG
ARGENTINA	AR
ARMENIA	AM
ARUBA	AW
AUSTRALIA	AU
AUSTRIA	AT
AZERBAIJAN	AZ
B	
BAHAMAS	BS
BAHRAIN	BH
BANGLADESH	BD
BARBADOS	BB
BELARUS	BY
BELGIUM	BE
BELIZE	BZ
BENIN	BJ
BERMUDA	BM
BHUTAN	BT
BOLIVIA	BO
BOSNIA AND HERZEGOVINA	BA
BOTSWANA	BW

Country names	ISO 3166-1-alpha-2 code
BOUVET ISLAND	BV
BRAZIL	BR
BRITISH INDIAN OCEAN TERRITORY	IO
BRUNEI DARUSSALAM	BN
BULGARIA	BG
BURKINA FASO	BF
BURUNDI	BI
C	
CAMBODIA	KH
CAMEROON	CM
CANADA	CA
CAPE VERDE	CV
CAYMAN ISLANDS	KY
CENTRAL AFRICAN REPUBLIC	CF
CHAD	TD
CHILE	CL
CHINA	CN
CHRISTMAS ISLAND	CX
COCOS (KEELING) ISLANDS	CC
COLOMBIA	CO
COMOROS	KM
CONGO	CG
CONGO, THE DEMOCRATIC REPUBLIC OF THE	CD
COOK ISLANDS	CK
COSTA RICA	CR
CÔTE D'IVOIRE	CI
CROATIA	HR
CUBA	CU
CYPRUS	CY
CZECH REPUBLIC	CZ
D	
DENMARK	DK
DJIBOUTI	DJ

Country names	ISO 3166-1-alpha-2 code
DOMINICA	DM
Country names	**ISO 3166-1-alpha-2 code**
DOMINICAN REPUBLIC	DO
E	
ECUADOR	EC
EGYPT	EG
EL SALVADOR	SV
EQUATORIAL GUINEA	GQ
ERITREA	ER
ESTONIA	EE
ETHIOPIA	ET
F	
FALKLAND ISLANDS (MALVINAS)	FK
FAROE ISLANDS	FO
FIJI	FJ
FINLAND	FI
FRANCE	FR
FRENCH GUIANA	GF
FRENCH POLYNESIA	PF
FRENCH SOUTHERN TERRITORIES	TF
G	
GABON	GA
GAMBIA	GM
GEORGIA	GE
GERMANY	DE
GHANA	GH
GIBRALTAR	GI
GREECE	GR
GREENLAND	GL
GRENADA	GD
GUADELOUPE	GP
GUAM	GU
GUATEMALA	GT
GUERNSEY	GG

Country names	ISO 3166-1-alpha-2 code
GUINEA	GN
GUINEA-BISSAU	GW
Country names	**ISO 3166-1-alpha-2 code**
GUYANA	GY
H	
HAITI	HT
HEARD ISLAND AND MCDONALD ISLANDS	HM
HOLY SEE (VATICAN CITY STATE)	VA
HONDURAS	HN
HONG KONG	HK
HUNGARY	HU
I	
ICELAND	IS
INDIA	IN
INDONESIA	ID
IRAN, ISLAMIC REPUBLIC OF	IR
IRAQ	IQ
IRELAND	IE
ISLE OF MAN	IM
ISRAEL	IL
ITALY	IT
J	
JAMAICA	JM
JAPAN	JP
JERSEY	JE
JORDAN	JO
K	
KAZAKHSTAN	KZ
KENYA	KE
KIRIBATI	KI
KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF	KP
KOREA, REPUBLIC OF	KR
KUWAIT	KW
KYRGYZSTAN	KG

L	
LAO PEOPLE'S DEMOCRATIC REPUBLIC	LA
LATVIA	LV
Country names	**ISO 3166-1-alpha-2 code**
LEBANON	LB
LESOTHO	LS
LIBERIA	LR
LIBYAN ARAB JAMAHIRIYA	LY
LIECHTENSTEIN	LI
LITHUANIA	LT
LUXEMBOURG	LU
M	
MACAO	MO
MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF	MK
MADAGASCAR	MG
MALAWI	MW
MALAYSIA	MY
MALDIVES	MV
MALI	ML
MALTA	MT
MARSHALL ISLANDS	MH
MARTINIQUE	MQ
MAURITANIA	MR
MAURITIUS	MU
MAYOTTE	YT
MEXICO	MX
MICRONESIA, FEDERATED STATES OF	FM
MOLDOVA, REPUBLIC OF	MD
MONACO	MC
MONGOLIA	MN
MONTENEGRO	ME
MONTSERRAT	MS
MOROCCO	MA
MOZAMBIQUE	MZ

MYANMAR	MM
N	
NAMIBIA	NA
NAURU	NR
Country names	**ISO 3166-1-alpha-2 code**
NEPAL	NP
NETHERLANDS	NL
NETHERLANDS ANTILLES	AN
NEW CALEDONIA	NC
NEW ZEALAND	NZ
NICARAGUA	NI
NIGER	NE
NIGERIA	NG
NIUE	NU
NORFOLK ISLAND	NF
NORTHERN MARIANA ISLANDS	MP
NORWAY	NO
O	
OMAN	OM
P	
PAKISTAN	PK
PALAU	PW
PALESTINIAN TERRITORY, OCCUPIED	PS
PANAMA	PA
PAPUA NEW GUINEA	PG
PARAGUAY	PY
PERU	PE
PHILIPPINES	PH
PITCAIRN	PN
POLAND	PL
PORTUGAL	PT
PUERTO RICO	PR
Q	
QATAR	QA

Country names	ISO 3166-1-alpha-2 code
R	
RÉUNION	RE
ROMANIA	RO
RUSSIAN FEDERATION	RU
RWANDA	RW
Country names	**ISO 3166-1-alpha-2 code**
S	
SAINT BARTHÉLEMY	BL
SAINT HELENA	SH
SAINT KITTS AND NEVIS	KN
SAINT LUCIA	LC
SAINT MARTIN	MF
SAINT PIERRE AND MIQUELON	PM
SAINT VINCENT AND THE GRENADINES	VC
SAMOA	WS
SAN MARINO	SM
SAO TOME AND PRINCIPE	ST
SAUDI ARABIA	SA
SENEGAL	SN
SERBIA	RS
SEYCHELLES	SC
SIERRA LEONE	SL
SINGAPORE	SG
SLOVAKIA	SK
SLOVENIA	SI
SOLOMON ISLANDS	SB
SOMALIA	SO
SOUTH AFRICA	ZA
SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS	GS
SPAIN	ES
SRI LANKA	LK
SUDAN	SD
SURINAME	SR

SVALBARD AND JAN MAYEN	SJ
SWAZILAND	SZ
SWEDEN	SE
SWITZERLAND	CH
SYRIAN ARAB REPUBLIC	SY
Country names	**ISO 3166-1-alpha-2 code**
T	
TAIWAN, PROVINCE OF CHINA	TW
TAJIKISTAN	TJ
TANZANIA, UNITED REPUBLIC OF	TZ
THAILAND	TH
TIMOR-LESTE	TL
TOGO	TG
TOKELAU	TK
TONGA	TO
TRINIDAD AND TOBAGO	TT
TUNISIA	TN
TURKEY	TR
TURKMENISTAN	TM
TURKS AND CAICOS ISLANDS	TC
TUVALU	TV
U	
UGANDA	UG
UKRAINE	UA
UNITED ARAB EMIRATES	AE
UNITED KINGDOM	GB
UNITED STATES	US
UNITED STATES MINOR OUTLYING ISLANDS	UM
URUGUAY	UY
UZBEKISTAN	UZ
V	
VANUATU	VU
VATICAN CITY STATE	see HOLY SEE

Country names	ISO 3166-1-alpha-2 code
VENEZUELA	VE
VIET NAM	VN
VIRGIN ISLANDS, BRITISH	VG
VIRGIN ISLANDS, U.S.	VI
W	
WALLIS AND FUTUNA	WF
WESTERN SAHARA	EH
Country names	**ISO 3166-1-alpha-2 code**
Y	
YEMEN	YE
Z	
ZAIRE	see CONGO, THE DEMOCRATIC REPUBLIC OF THE
ZAMBIA	ZM
ZIMBABWE	ZW