Using the Global Register of Introduced and Invasive Species- GRIIS for reporting and national planning of alien and invasive species management

The data and information mobilized through the Global Register of Introduced and Invasive Species (GRIIS) supports countries to prioritize invasive alien species management action, especially, prevention of introduction through effective management of pathways of introduction and spread.

GRIIS supports countries in meeting Aichi Biodiversity Target 9 of the Strategic Plan for Biodiversity 2011-2020. The Strategic Plan for the 2011- 2020 period was adopted during the 10th meeting of the Conference of the Parties in 2010. The plan with the 20 Aichi Biodiversity targets provides an overall framework on the management of biodiversity to all biodiversity related conventions and partners.

GRIIS presents data and information on occurrences of naturalized alien species and invasive species[1] as annotated and verified country-wise inventories. These data are validated and verified by nominated country experts in biological invasions. Annotations include (i) species name and taxonomy, (ii) environment/system in which the species occurs, (iii) the provenance/ origin of the species, (iv) the 'invasiveness' status of the species – if any evidence of impact has been recorded on natural areas (geographical areas whose distinguishing characteristics are natural and not human modified systems), native species, ecosystems and the services they offer. (vi) all references of source information are included

A well-designed query system provides users the functionality to build a customized query and download the result in a PDF or CSV format. A few applications are outlined below:

1. Which alien species in my country are known to be 'invasive'- those alien species for which, aggressive spread and/or evidence of impacts on natural areas, native species, ecosystems and the services they offer, are recorded? – this information would help us develop a shortlist of invasive species to prioritize for management action, set targets and monitoring protocols, select species to conduct risk assessments, impact assessments, threat abatement or management plans.

Check the 'country name' and select 'evidence of impact' button.

You can also add in annotations such as animals, plants, fungi etc.; environment/system types such as freshwater, terrestrial.

[1] *The focus of the GRIIS inventories or checklists are on naturalized and invasive species, however, some inventories include 'casual' or 'occasional' species or species 'present in contained facilities'; it is envisioned that the quality of species records will improve with the availability of better information*

CASE STUDY: If the user wants a list of Plant species in Argentina that are known to be invasive (evidence of impact recorded) – the user should select the country (Argentina); kingdom (Plantae) and Evidence of impacts, and click on 'Search' (see below- Search 1)

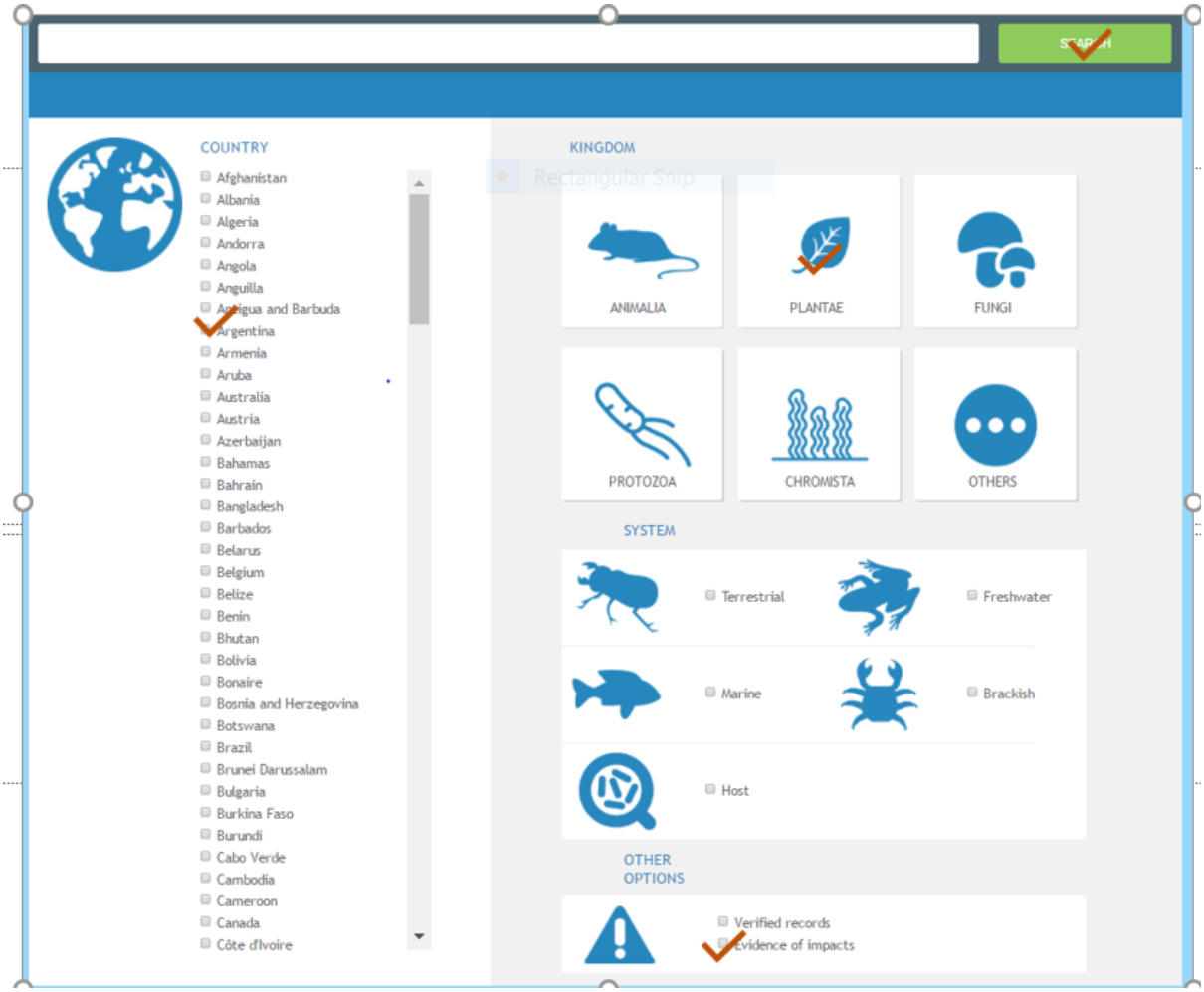

Figure 1- Search 1

The result of the query will display as below (Figure 2)- 264 alien plant species have been recorded in Argentina that are known to be invasive. This resultant list can be downloaded as a csv or PDF file. This shortlist of plant species could be used to set management priorities.

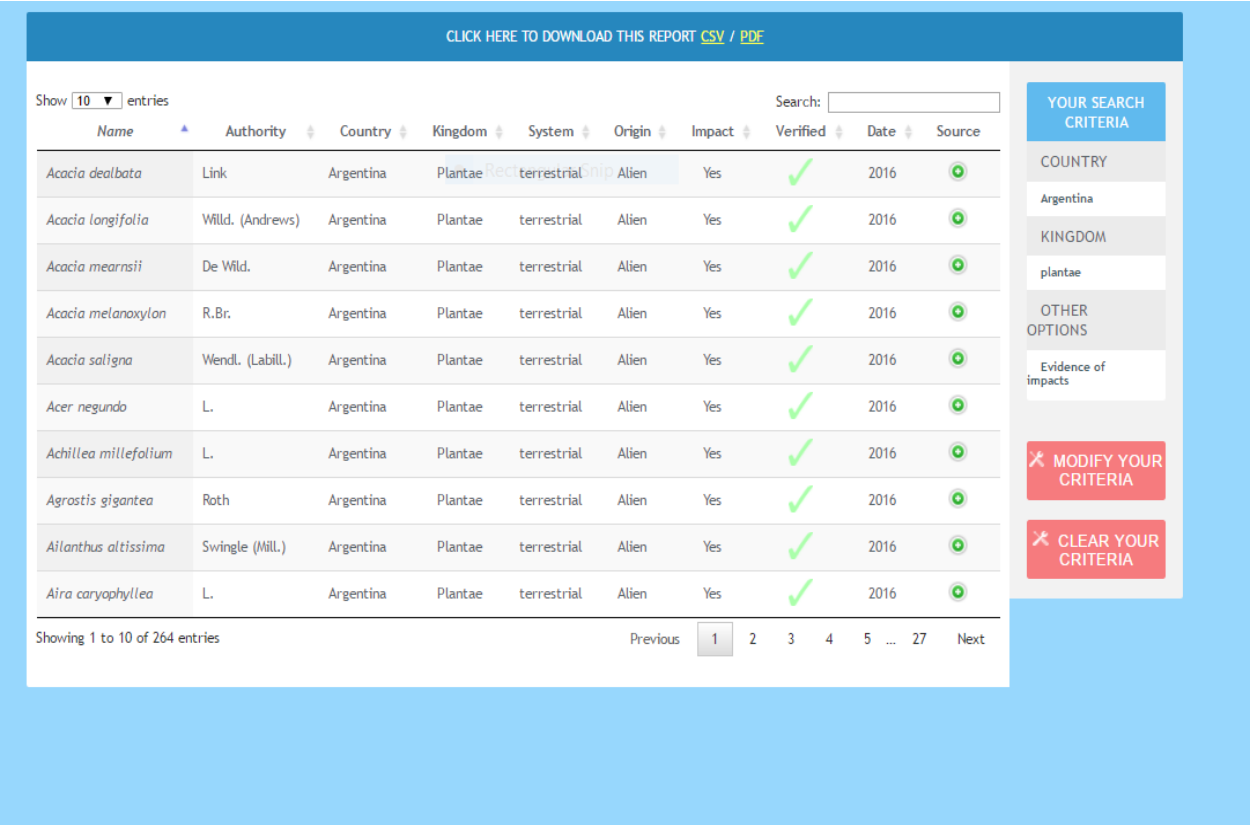

Figure 2: Results of Search 1

Which alien and invasive species are present in my trading partner country, that are not present in my country? – this information would help me study and measure the likelihood of which alien species can enter our country, considering likelihood pathways of entry and implement pathway management measures to prevent their entry. Additionally, you can follow the links to other knowledge products that describe likely pathways of introduction and spread. [Link to Pathways resource]

CASE STUDY: If the user is from the Solomon Islands in Oceania and would like to find out a list of alien and invasive species that are present in his neighbouring countries of Vanuatu and Tuvalu; but not present in the Solomon Islands

The user needs to select each of the countries Vanuatu, Tuvalu and the Solomon Islands. And click on the Search tab. CSV files for each of the countries can be downloaded. The csv files can be converted to Excel files. Once you obtain the three inventories, merge the three lists and colour-code each of the countries in a distinct colour. Sort the list on species names, scroll down the list and flag the species that are present in Vanuatu and Tuvalu but not in the Solomon Islands.

Once the shortlist of species is obtained follow the link to the ISSG Pathway Resource and compile the likely pathways of introduction and spread for these species. Cluster pathway class and sub-class. The resultant data will provide a baseline to support implementation of pathway management measures.

National Biodiversity Strategy and Action Plans (NBSAPs) are policy instruments developed by countries to provide information on their plans and activities aimed at implementation of the Strategic plan and Aichi targets. Aichi target 9 is focused on the threat of invasive alien species, it states that- "*By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment*"

Verified authoritative baseline data on the presence of alien and invasive species at the country, island and site level, and their impacts on natural areas, native species, ecosystems and the services they offer, is therefore fundamental to the implementation of the Strategic Plan and targets.

GRIIS annotated and verified country-wise inventories are a key knowledge base to inform national planning of invasive species management. GRIIS data can support prioritization of invasive species management action, assist in planning preventative action using key information of species present in countries that are your neighbors and trading partners.

GRIIS is a dynamic tool allowing countries to report newly identified alien species, records of evidence of impacts.