

# IPBES invasive alien species assessment, data management report for Chapter 3. Section 3.2.4.3: Breeding and genomic technologies

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## Project leader and contributors:

- Rafael de Oliveira Xavier ([filosxavier@yahoo.com.br](mailto:filosxavier@yahoo.com.br))

## Data curator(s):

- Rafael de Oliveira Xavier ([filosxavier@yahoo.com.br](mailto:filosxavier@yahoo.com.br))

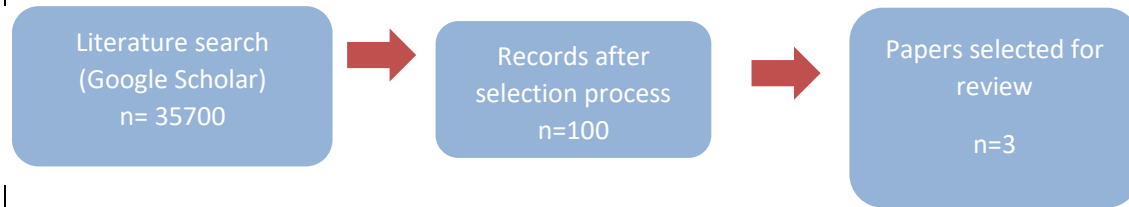
- Ryoko Kawakami ([r-kawakami@iges.or.jp](mailto:r-kawakami@iges.or.jp))

## Description

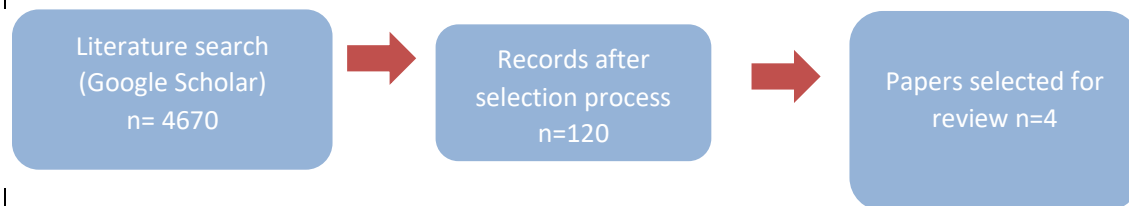
Section 3.2.4.3 assesses the role of breeding and genomic technologies as drivers of biological invasions in Chapter 3 of IPBES thematic assessment of invasive alien species and their control. The experts conducted a systematic review to report on the existing knowledge on this driver. This systematic review consists in the main source of evidence for the section.

## Process overview

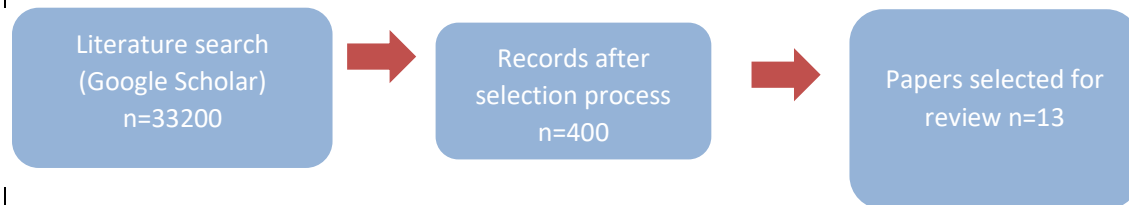
Search 1:



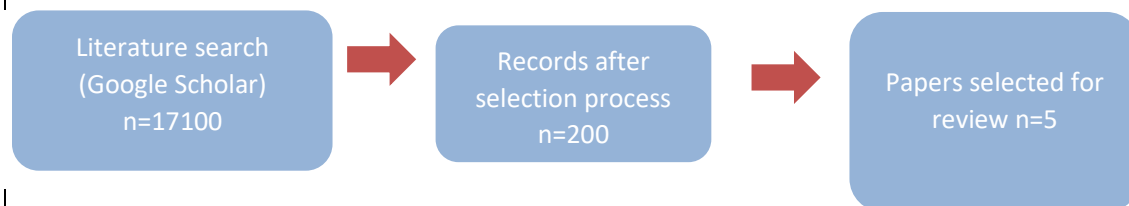
Search 2:



Search 3:



Search 4:



## Protocol

- **Type of analysis/search/review:** literature review
- **Search language(s):** English
- **Search terms**

Search 1: CRISPR "gene editing" "non native" 6018 OR exotic OR alien OR weed OR invasive OR "non indigenous"

Search 2: breed \* cultivar artificial selection 6021 "non native" OR exotic OR alien OR invasive OR "non indigenous"

- **Search engine:** Google Scholar

- **Date:**

Search 1: 22/9/2019

Search 2: 24/9/2019

Search 3: 17/11/2019

Search 4: 18/11/2019

-**Searched time period:**

Search 1: since 2000

Search 2: since 2000

Search 3: since 2000

Search 4: since 2000

- **Overview of the search results and selection criteria:**

Number of search result:

Search 1: 3

Search 2: 4

Search 3: 13

Search 4: 5

Selection criteria: Studies assessing the role of artificial selection and gene technologies as a driver of invasive alien species.

Number of added papers (experts' knowledge and reviewers' recommendations): 5

- **Step by step analysis (methodology, categories, etc.):**

Number of papers reviewed: 30 (See [Chapter 3 literature review masterdatabase.xlsx](#))

Fields extracted:

- Publication title

- Year of publication

- Invasion stage [Uptake and transport; Introduction; Establishment; Spread]

- Biomes [Terrestrial; Freshwater; Marine]

- Taxon [Plant; Vertebrate; Invertebrate; Microbes]

- Type of study [Primary study; Review; Meta-analysis]

- Region [Europe and Central Asia; Asia-Pacific; Oceania; Americas; Africa]

- Unit of analysis [IPBES units of analysis]

-Cross-cutting theme [Scenarios and models; indigenous and local knowledge; Good quality of life]

-Comment (free text)

- Files: [Chapter 3 literature review masterdatabase.xlsx](#)