TRANSLOC database
User handbook for population data

The data fields are listed below as they appear in a 'population page' for a 'participant' user (Read data > Populations).

1. POPULATION CODE

Each translocated population is identified by a unique code, generated automatically, formed by the first 4 letters of the genus name followed by the first 4 letters of the species name, a hyphen, and a number from 001 to 999.

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2. BASIC INFORMATION

Genus / Species / Subspecies

Genus, species and (eventually) subspecies names of the translocated taxon, as they appear in the Global Biodiversity Information Facility (https://www.gbif.org/), except in cases where the correspondence between the names used in the documents describing the translocation and the GBIF accepted names is unclear.

Alternative taxonomic names used in documents about this translocated population

Precision given in cases when taxonomic names used in documents about the translocated population differ from GBIF accepted names.

Country

Country where the center of the translocated population was occurring at the date of the latest information.

Year of first RST

Year of the first release / sowing / transplantation intervention (or the median year if only a year interval is known).

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3. INFORMATION FOR DATA MANAGEMENT BY ADMINISTRATORS

Population code

The same as above.

Creator name

Name of the administrator who 'created' the population in the database.

Creation date

Date at which the population was created in the database.

Last modification

Date at which any administrator modified this population page.

Last administrator's check

Last year during which information about this translocated population was sought by any administrator of the database.

Initial information

Specifies how the initial information about this translocated population was collected.

List of possible answers:

- **Request**: directly from a request on an internet search engine, using keywords focused on species translocations.

- **Inquiry**: from an interview (in a quite formal context), specifically seeking information on the occurrence of translocations, with a representative of a public institution, association, private company, etc., acting as stakeholder in translocation projects.

- **Personal communication**: from a discussion out of the formal context described above.

- **Citation**: from a scientific article or any other document (poster, report, web page…) which topic was not necessarily this particular translocated population, but which suggested its existence (e.g., a review paper on translocations, an article on another topic, a naturalist or conservation web page…).

- **Other**.

Most recent data

Year of the most recent information available in the database about this translocated population.

Potential sources of additional information

List of potential sources (contacts, websites, periodicals…) of information NOT YET included in the database.

Metapopulation

If the translocated population has been an element of a metapopulation made of other translocated populations recorded in the database, this field contains a code, unique to any metapopulation, formed by the first 4 letters of the genus name followed by the first 4 letters of the species name, a hyphen, 'meta-', and a number from 001 to 999. Otherwise, this field contains 'NA' (not applicable).

Community

If the translocated population has been an element of a community of several translocated species recorded in the database, this field contains a code, unique to any community, formed by 'commun-', and a number from 001 to 999. Otherwise, this field contains 'NA' (not applicable).

Publication

Specifies whether, at least, the species name, country and year of the first release / sowing / transplantation intervention (or an interval), appeared in a publication. We call publication any document intended to be reproduced and disseminated publicly, which can be a peer-reviewed scientific journal article, an article from a naturalist journal, a published report, proceedings of a conference, etc. On the contrary, this does not include posters or conference abstracts intended for the restricted audience of conference participants, even though we can found them after on the internet.

List of possible answers:

- **Published**
- **Not published**

General remarks

Any useful general remark not included elsewhere in the database about the translocated population.

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4. CONTEXT tab

Organisations

This field lists all the organizations (e.g., public institutions, associations, private companies…) and programs (e.g., LIFE programs) that have been involved in the translocation project.

Reason

Specifies the reason(s) from which the translocation project has emerged.

List of possible answers:

- **Legal duty**: the translocation project mainly resulted from legal or regulatory obligations (e.g., as an accompanying measure to a public works program)

- **Voluntary initiative**: the translocation project did not result from legal or regulatory obligations.

- **Both**: both legal duty and voluntary initiative are sufficiently mixed together to make it difficult to identify the most important.

Species protection status

Specifies whether, when setting up project, the translocated taxon benefited from a given legal protection status.

List of possible answers:

- **European**

- **National**

- **Regional**

- **None**

Rescue

Specifies whether the translocation has involved individuals living in a natural site planned to be altered in the near future (due to, *i.e.*, a construction project), so that the translocated individuals were intended to die sooner if not translocated.

List of possible responses:

- **Yes**

- **No**

Prior extinction year

Extinction year (or the median of an interval of years) of the population in the case of a reintroduction, or '**NA**' if the translocation is not a reintroduction.

Prior extinction year interval

Number of years separating the median and the bound of the year interval of the population extinction in the case of a reintroduction. '**NA**' if the translocation is not a reintroduction.

Direct drivers

In the case where the translocated taxon has suffered from the decline of a number of populations at a large scale, and/or a specific decline of one population, or group of populations (see 'Scale'), this field specifies the habitat changes that have certainly or likely lowered demographic rates, i.e., individual survival, growth or fecundity and that have consequently led to a deterioration of the

niche/habitat match, at the specified scale. These direct drivers can be seen as proximate causes of population decline from the point of view of the declining populations.

List of possible answers:

- **Problematic competitor, predator or parasite**: Decrease in one or several demographic rates due to the arrival or increase in the habitat of the density of organisms or viruses directly impacting the focus organism as competitors, predators or parasites (they may include humans).

Example: climbers using cliff microsites (rock clefts) as a resource for their feet, hands, and climbing equipment, then decreasing this resource for cliff-dwelling species.

- **Pollution**: Decrease in one or several demographic rates due to an excess of material, chemical, or nutrients, whatever the remote cause of this excess, directly impacting the focus organism.

- **Change in climate patterns**: Decrease in one or several demographic rates due to a tendency of climatic variables either to change towards means outside of the evolutionary experience of the focus organism or to fluctuate outside of previous ranges of variation (resulting or not resulting from increased atmospheric greenhouse gases), which directly affects the organism.

- **Change in other environmental variables**: Decrease in one or several demographic rates due to a tendency of another environmental variable affecting populations either to change towards new means or to fluctuate outside previous ranges of variation. This can be, for example, a change in the density of a mutualistic species (pollinating insect…), a change in the frequency of floods or fires for species living in habitats regularly subject to these events, etc.

- **Habitat loss**: Decrease in most demographic rates due to a major change in the habitat that completely disrupt the niche/habitat match. This habitat loss can be either sudden (e.g., a fire in a habitat not regularly subject to fires) or slow (e.g., habitat loss due to progressive vegetation succession) It can be due to human activities (e.g., a habitat destroyed for the construction of a road or completely modified for agriculture, or following abandonment of agriculture or grazing…) or to natural events (e.g., hurricanes, fires, lava flow…); see underlying factors for the description of remote causes.

- **NA**: Not applicable because the translocated taxon has not suffered from the decline of a number of populations at a large scale, and/or a specific decline of one population, or group of populations.

Underlying factors

In the case where the translocated taxon has suffered from the decline of a number of populations at a large scale, and/or a specific decline of one population, or group of populations (see 'Scale'), this field specifies the factors that have been likely or certainly responsible for the direct drivers altering population demographic rates. These factors are underlying the habitat changes from the point of view of declining populations and can thus be seen as more remote compared to these direct drivers.

*Definitions are close to the ones of the CMP Direct Threats Classification 2.0 (*http://cmp-openstandards.org/tools/threats-and-actions-taxonomies/, see also Salafsky et al. 2008*), but some categories do not appear in underlying factors (displaced to direct drivers) or do appear but with a modified definition.*

List of possible answers:

- **Residential and commercial development**: Human settlements or other non-agricultural land

uses with a substantial footprint. These are threats tied to a defined and relatively compact area, which distinguishes them from those in “Transportation & Service Corridors” which have a long narrow footprint, and “Human Intrusions & Disturbance” which do not have an explicit footprint. Note that we can use standard land-cover classifications to assess the stresses delivered by these direct threats. These settlements include housing & urban areas (urban areas, suburbs, villages, vacation homes, shopping areas, offices, schools, hospitals), commercial & industrial areas (manufacturing plants, shopping centers, office parks, military bases, power plants, train & ship yards, airports), tourism & recreation areas (ski areas, golf courses, beach resorts, cricket fields, county parks, campgrounds).

- **Agriculture and aquaculture**: Threats from farming and ranching as a result of agricultural expansion, intensification or practices; includes silviculture, mariculture and aquaculture. The threats may result from the conversion of land to agricultural use (farms, plantations, silviculture, vineyards, fish ponds on farms, articficial shellfish or algual beds, etc.) OR from the use of agrochemicals OR from effluents from agricultural, silivicultural, and aquaculture systems (different from CMP threat definitions).

- **Energy production and mining**: Threats from production of non-biological resources. The threats may result from oil & gas drilling, mining and quarrying, energy production from geothermy, solar or wind energy equipment, dams for hydro power...

- **Transportation and service corridors**: Threats from long, narrow transport corridors and the vehicles that use them including associated wildlife mortality. This includes transportation corridors outside of human settlements and industrial developments: roads and railroads, utility and service lines, shipping lanes, flight paths...

- **Biological resource use**: Threats from consumptive use of **wild** biological resources including deliberate and unintentional harvesting effects; also persecution or control of specific species. Consumptive use means that the resource is removed from the system or destroyed. These threats in the class can affect both target species (harvest of desired plant or animal species) as well as "collateral damage" to non-target species (e.g. a butterfly threatened by harvesting of the host plant of its larvae). Persecution/control involves harming or killing species because they are considered undesirable. The threats include hunting & collecting terrestrial animals, gathering terrestrial plants, logging & wood harvesting, fishing & harvesting aquatic resources...

- **Human intrusions and disturbance**: Threats from human activities that alter, destroy and disturb habitats and species associated with non-consumptive uses of biological resources or habitats. Non-consumptive use means that the resource is not removed - multiple people can use the same resource (for example, trampling, rock clibing). These threats typically do not permanently destroy habitat except perhaps in extremely severe manifestations. These threats include recreational activities (*off-road vehicles, motorboats, jet-skis, snowmobiles, ultralight planes, dive boats, whale watching, mountain bikes, hikers, birdwatchers, skiers, pets in recreational areas, temporary campsites, caving, rock-climbing), w*ar, civil unrest & military exercises, work & other activities (people spending time in or traveling in natural environments for reasons other than recreation or military activities)

- **Natural system modifications**: Threats from actions that convert or degrade habitat in service of “managing” natural or semi-natural systems, often to improve human welfare. This category deals primarily with changes to natural processes such as fire, hydrology, and sedimentation, rather than land use. Thus it does not include threats relating to agriculture (which should be under *Agriculture & Aquaculture*), or infrastructure (*Residential & Commercial Development* and *Transportation & Service Corridors*). These threats include fire & fire suppression, dams & water management / use (except for hydro power, see Energy production and mining), other ecosystem modifications (*land*

reclamation projects, rip-rap along shoreline, mowing grass, tree thinning in parks, beach construction, removal of snags from streams), removing / reducing human maintenance (lack of mowing of meadows, reduction in controlled burns, lack of indigenous management of key ecosystems, ceasing supplemental feeding of condors, abandonment of grazing…).

- **Introduction of alien invasive**: Threats from the introduction of non-native plants, animals, pathogens/microbes, or genetic materials that have or are predicted to have harmful effects on biodiversity following their introduction, spread and/or increase in abundance or virulence. Problematic native species ARE NOT included in these threat (different from CMP threat classification);

- **Global climate change (from increased atmospheric greenhouse gases)**: Threats resulting from increased atmospheric greenhouse gases like CO_2 (different from CMP direct threat classif).

- **Other factor unlinked (or weakly linked) to human activities**: Extrinsic threat from volcanic eruptions, tsunamis, natural fire, or intrinsic threat due to reproductive system of the species, body size…, that threaten the species even in the lack of any human threat.

- **NA**: Not applicable because the translocated taxon has not suffered from the decline of a number of populations at a large scale, and/or a specific decline of one population, or group of populations.

Scale

Specifies the scale of action of the direct drivers and underlying factors.

List of possible answers:

- **Large**: Indicates that the specified direct driver or underlying factor is a likely cause of decline of a number of populations of the translocated taxa over a geographic scale larger than the population scale or larger than the scale of the group of populations in the case of populations close together in a restricted geographical area (typically within 1 km^2).

- **Small**: Indicates that the specified direct driver or underlying factor is a likely cause of decline of the specific population, or group of populations in the case of populations close together in a restricted geographical area (typically within 1 km^2), involved in the translocation. These population or group of populations can be either from the hosting site, in the case of reintroduction or reinforcement, or from the source location of the biological material that has been translocated in situations where this location was the cause of concern resulting in the translocation.

- **NA**: Not applicable where the translocated taxon has not suffered from the decline of a number of populations at a large scale, and/or a specific decline of one population, or group of populations.

Justifications

Specifies the justifications of setting up the translocation project.

List of possible answers:

- **Cultural**: To obtain a viable population that will provide a cultural service within the meaning of the Millenium Ecosystem Assessment (2005).

- **Provisionning**: To obtain a viable population that will provide a provisionning service within the meaning of the Millenium Ecosystem Assessment (2005).

- **Regulation**: To obtain a viable population that will provide a regulation service within the meaning of the Millenium Ecosystem Assessment (2005).

- **Support**: To obtain a viable population that will provide a support service within the meaning of the Millenium Ecosystem Assessment (2005).

- **Biodiversity conservation**: To obtain a viable population because it is an element of biodiversity, and that biodiversity is given a value for utilitarian, scientific, moral, ethical, or philosophical reasons.

- **Experimental**: the population has been translocated for experimental purposes (e.g., to understand the genetics of adaptation, to test methods of sowing, transplanting, etc.).

Nota bene: The implementation of the translocation cannot have an experimental justification for only justification. If so, it does not appear in the database. To appear in the base, the will to generate a viable population is necessary (see in the Welcome page: ***Precisions about which translocated populations can be included in the database and which populations cannot, according to translocation type****).*

Details about justifications

Field which gives possibly details on the justifications indicated in the field 'Justification'.

Precise program objectives

This field possibly specifies the objectives of the project as described in the documents referring to it. These goals must be more precise than 'reintroducing the population'. For example: 'to have a population still present after 2 years' or 'to obtain reproducing individuals' ...

Remarks about context

Any useful remark not included elsewhere on the origin and the context of the translocation project.

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5. TYPE/PHASE tab

Translocation type

Specifies the type of translocation according to the following classification.

List of possible answers:

- **Reinforcement**: translocation of individuals added to an existing population (for our definition of the population, see in the Welcome page: **Precisions about population delimitation**).

- **Reintroduction**: translocation of individuals to a site where a population of the taxon was known and from which it has gone extinct.

- **Pop creation within extent of occurrence**: translocation of individuals to a site that the taxon, to our knowledge, has not occupied before, and which was within the extent of occurrence of the taxon at the time of the translocation (for a definition of the extent of occurrence, see UICN 2001).

- **Pop creation beyond extent of occurrence**: translocation of individuals to a site that the taxon, to our knowledge, has not occupied before, and which was outside the extent of occurrence of the taxon at the time of the translocation.

IUCN type

Specifies the type of translocations following IUCN categories (see IUCN/SSC 2013).

List of possible answers:

- **Reinforcement**: "the intentional movement and release of an organism into an existing population of conspecifics" (see IUCN/SSC 2013).

- **Reintroduction**: "the intentional movement and release of an organism inside its indigenous range from which it has disappeared" (see IUCN/SSC 2013).

- **Assisted colonization**: "the intentional movement and release of an organism outside its indigenous range to avoid extinction of populations of the focal species" (see IUCN/SSC 2013).

- **Ecological replacement**: "the intentional movement and release of an organism outside its indigenous range to perform a specific ecological function" (see IUCN/SSC 2013).

Reinforcement type

Specifies the place where the translocated individuals were born, in the case of reinforcement.

List of possible answers:

- **Same population**: In this case, for the translocation to be considered as reinforcement and be included in the database, either the translocated individuals had an ex situ stay sufficiently prolonged to enable them to go through a stage of the life cycle with a higher survival rate than it would have been in natura, or they were kept ex situ for a period during which the population size declined (eg, seeds harvested in natura and kept in the seed bank for several years during which population size declined.

- **Ex situ**: when they were born ex situ, regardless of the origin of their parents

- **Other population(s)**: when they were born in another or other natural population(s).

- **Multi**: when they were born in at least two different place categories above (details in Remarks about translocation type)

- **NA**: Not applicable because the translocation is not a reinforcement.

Clustering

Specifies whether the translocated population recorded in the database constitutes a clustering of at least two entities considered separately in documents describing this translocation.

List of possible answers:

- **Yes**

- **No**

Separation

Specifies whether the translocated population recorded in the database constitutes a separate entity of a larger group considered as a population in documents describing this population.

List of possible answers:

- **Yes**

- **No**

Multi-site

Specifies whether at least one additional population of this taxon has been translocated the same year in the same region in the same project.

List of possible answers:

- **Yes**

- **No**

Multi-species

Specifies whether at least one additional species has been translocated the same year in the same particular site.

List of possible answers:

- **Yes**

- **No**

First RST year

Year of the first release / sowing / transplantation intervention (or the median year if only an interval of years interval is known).

Year interval of first RST

Number of years separating the median and the bound of the interval of years of the first release / sowing / transplantation intervention.

Last RST* year

Year of the last release / sowing / transplantation intervention (or the median year if only an interval of years is known).

Year interval of last RST

Number of years separating the median and the bound of the interval of years of the last release / sowing / transplantation intervention.

Program phase

Specifies the phase at which was the translocation project at the time of the most recent information available in the database (see 'Most recent data').

List of possible answers:

- **Ongoing**: at the time of the most recent information available in the database, some interventions (releases/sowings/transplantations) had already taken place but others were planned later.

- **Monitoring post-interventions**: at the time of the most recent information available in the database, all planned interventions had already taken place the translocated population was under monitoring.

- **Unknown post-interventions**: at the time of the most recent information available in the database, all planned interventions had already taken place, and it was unknown whether the translocated population was under monitoring.

- **Stopped**: at the time of the most recent information available in the database, all planned interventions had already taken place, and it was quite clear that the translocated population was not monitored anymore.

Metapopulation

As in 'INFORMATION FOR DATA MANAGEMENT BY ADMINISTRATORS'

Community

As in 'INFORMATION FOR DATA MANAGEMENT BY ADMINISTRATORS'

Remarks about translocation type

Any useful remark not included elsewhere on the type or phase of the translocation project.

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6. LOCATION tab

This tab gives information on the location of the translocated population. There is an *approximate location*, available to any visitor, and an *accurate location*, which can be provided upon request. The *approximate location* gives the country and, when available, the region (or first administrative division), the province (or second administrative division), and, generally, the municipality. In some cases when it seemed more relevant or useful, the name of the municipality is replaced by the name of a natural park or reserve, of an island, a cape, a peak, or a lake. The location points in the public map show the center of the municipality (or park, island...). Both *approximate* and *accurate locations* give the location of the center of the translocated population at the time of the most recent information available in the database. The 'Other locations' fields give, when necessary, the additional municipalities over which the translocated population extends.

Main locality (center of the population)

Here is the *approximate location* (as explained above) of the center of the translocated population at the time of the most recent information available in the database (see 'Most recent data').

Other localities

This field gives, when necessary, the additional municipalities over which the translocated population extends, at the time of the most recent information available in the database (see 'Most recent data').

Pop. latitude

Latitude in decimal degrees of the *accurate location* of the center of the population (with a desired accuracy of one thousandth of a degree), at the time of the most recent information available in the database (see 'Most recent data').

Pop. latitude

Longitude in decimal degrees of the *accurate location* of the center of the population (with a desired accuracy of one thousandth of a degree), at the time of the most recent information available in the database (see 'Most recent data').

Pop. location (textual)

Textual description of the *accurate location* of the center of the translocated population, at the time of the most recent information available in the database (see 'Most recent data').

Remarks on population location

Any useful remark not included elsewhere on the translocated population location.

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7. HOSTING SITE tab

Site research and choice criteria

Here is a list of the considerations having weighed in the search or choice of the hosting site among different possibilities.

List of possible answers:

- **Similarity**: if considerations of ecological similarity between the site(s) of origin of the translocated individuals (or of their ancestors) and possible hosting sites have weighed in the search or choice for the hosting site. (We consider that the search for a hosting site favorable to the translocated taxon in general is obvious).

- **Property**: if land ownership considerations have weighed in the search or choice for the hosting site.

- **Future**: if considerations regarding what is planned in the future on the use, the development, the property, the protection ... of the sites have weighed in the search or choice for the hosting site.

- **Protection**: if site protection status considerations have weighed in the search or choice for the hosting site.

- **Heritage/history**: if heritage or historical considerations have weighed in the search or choice for the hosting site.

- **Attendance**: if considerations relating to the use of the site by the man (walkers, professionals ...) have weighed in the search or choice for the hosting site.

- **Technical feasibility**: if considerations relating to the technical feasibility (transport, accessibility of the site ...) have weighed in the search or choice for the hosting site.

- **Economic**: if economic considerations have weighed in the search or choice for the hosting site.

- **Administrative**: if administrative or regulatory considerations (excluding land ownership and protection status) have weighed in the search or choice for the hosting site.

- **None**: if none of the listed considerations weighed in the search or choice for the hosting site, for example because the translocation was a reinforcement or reintroduction and the hosting site was fully integrated within the original idea of the translocation project.

Main site criteria

Boxes allowing to hierarchize the criteria involved in the search or the choice of sites in main criteria (box checked) or secondary criteria (box not checked).

Distance nearest pop

Here is specified the distance in km between the translocated population and the nearest population of the same taxon at the time of the first RST (release/sowing/transplantation) intervention. **NA**: Not applicable, because the translocated population is the unique population of the taxon.

Nearest and origin

Here is specified whether the nearest population is one of the population from which the translocated individuals (or their close ancestors) were born.

List of possible answers:

- **Yes**

- **No**

- **NA**: Not applicable, because the translocated population is the unique population of the taxon.

Connection

Field which specifies whether the translocated population could be connected by gene flow (through the migration of diaspores, pollen, individuals...) to another population existing at the time

of the first RST (release/sowing/transplantation), whatever this population was natural or previously translocated.

List of possible answers:

- **Likely**

- **Unlikely**

- **NA**: Not applicable, because the translocated population is the unique population of the taxon.

Isolation cause

Field that optionally indicates why 'Likely' or 'Unlikely' was mentioned in the 'Connection' field.

Initial protection

Field which specifies whether the hosting site was, at the time of first RST (release/sowing/transplantation), partly or completely within a protected area, i.e., enjoying a special regulatory status with regard to the protection of nature.

List of possible answers:

- **Yes**

- **No**

Protection last check

Specifies whether the hosting site was, at the time of the most recent information available in the database (see 'Most recent data'), partly or completely within a protected area, i.e., enjoying a special regulatory status with regard to the protection of nature.

List of possible answers:

- **Yes**

- **No**

Consequence on protection

Specifies whether the hosting site benefited from a protected status following translocation and as a consequence of the translocation.

List of possible answers:

- **Yes**

- **No**

Site remarks

Any useful remark not included elsewhere on the hosting site.

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8. HABITAT tab

Habitat list

Here is a list of habitat types in which the translocated population is located, according to the EUNIS habitat types (https://eunis.eea.europa.eu/habitats.jsp) up to the third level of the EUNIS hierarchical classification.

Literal description

Reports the habitat of the translocated population as it is literally described in the documents about this population.

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9. BIOLOGICAL MATERIAL tab

Choice criteria biological material

Here is a list of the considerations having weighed in the choice of the biological material that has been translocated to the hosting site among different possibilities.

List of possible answers:

- **Genetics**: if genetic considerations have influenced the choice of translocated biological material, whether this choice was made on translocated individuals themselves or on their ancestors; these genetic considerations may be related to what is known or assumed of the level of adaptation of the biological material to the hosting site, or to problems related to the depression of consanguinity, or the hybrid depression, or a lack of variability...

- **Physiology**: if considerations related to their level of development (stage of the life cycle, age) or to their physiology (height, weight, sex ...) have weighed in the choice of translocated individuals.

- **Sanitary**: if considerations related to their health status (marks of infection, injuries ...) have weighed in the choice of translocated individuals.

- **Development**: if criteria related to the conditions in which they developed before the translocation influenced the choice of translocated individuals; the considerations taken into account may include the fact that the individuals had grown in nature or in captivity, that they had already been living in conditions with competitors or predators or parasites, etc. (excluding genetic considerations of their degree of adaptation to the hosting site).

- **Technical feasibility**: if considerations relating to the technical feasibility (transport, precautions necessary for the transfer of individuals ...), have weighed in the choice of translocated individuals, among a set of possible individuals.

- **Economic**: if economic considerations have weighed in the choice of translocated individuals, among a set of possible individuals.

- **Administrative**: if administrative or regulatory considerations weighed in the choice of translocated individuals, among a set of possible individuals.

Diversity of translocated stages

Specifies whether individuals from at least two different life-cycle stages were used in the translocation.

List of possible answers:

- **Yes**

- **No**

Stages

Field that lists the organs or stages in the life cycle of the translocated individuals, among the following possibilities.

List of possible answers:

- **Seeds/Diaspores**

- **Seedlings**: young plants (from sexual or asexual reproduction: layering, cuttings, etc.) with aerial parts comprising only a few leaves, possibly including cotyledons.

- **Older vegetative plants**: plants (derived from sexual or asexual reproduction) with well-developed aerial parts that have never before produced reproductive organs (flowers).

- **Adult plants** plants (derived from sexual or asexual reproduction) with developed aerial parts that have already produced flowers during their lifetime (or in bloom).

- **Underground plant parts**: bulbs, rhizomes, tubers... of a perennial plant.

- **Other organs**: e.g., thallus of a lichen

- **Plant fragments**: aerial or underground plant fragments, not necessarily well differentiated or determined, and possibly contained in soil that is transported

- **Eggs**

- **Larvae**

- **Juveniles**

- **Subadults**

- **Adults**

Birth of the tranlocated individuals

Specifies where the translocated individuals were born among two types of places.

List of possible answers:

- **Nature**

- **Captivity**

- **Both**: some individuals in nature, some in captivity (e.g. zoo, botanic garden...)

Diversity of natural origins

Specifies whether the translocated individuals (or their ancestors if they were born in captivity) originated from different natural populations.

List of possible answers:

- **Yes**

- **No**

Natural origins

Here is a list of the locations of the original natural populations of individuals used for translocation or their ancestors if they were born in captivity.

Remarks on biological material

Any useful remark not included elsewhere on the biological material.

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10. INTERVENTIONS tab

Habitat preparation

Specifies whether the hosting site benefited from any preparatory management such as brush clearing, fertilization, fencing... before translocating biological material in order to favor individual survival or population establishment.

List of possible answers:

- **Yes**

- **No**

Time ex situ

Specifies the time separating sampling of biological material in nature and the RST to the hosting site, among different possibilities.

List of possible answers:

- **A few days**

- **A few weeks**

- **A few months**

- **A few years**

- **XX** (numerical) **years**

- **Varying among individuals (numerical interval)**

Stage change

Specifies, only for individuals born in nature, whether they passed from one life-cycle stage to another between their sampling in nature and their translocation in the hosting site.

List of possible answers:

- **Yes**

- **No**

- **NA**: Not applicable because all translocated individuals were born in captivity.

Genetic program

Specifies whether the time passed ex situ was used to make controlled crosses or select biological traits thought to be favorable to translocation success.

List of possible answers:

- **Yes**

- **No**

- **NA**: Not applicable because no translocated individuals has experienced ex situ time.

Increase in number

Specifies whether the time passed ex situ was used to increase the number of individuals (through vegetative propagation, ex-situ sexual reproduction in gardens or animal husbandry…).

List of possible answers:

- **Yes**

- **No**

- **NA**: Not applicable because no translocated individuals has experienced ex situ time.

Increase methods

Optional details on methods used to increase the number of individuals during ex situ time.

Environmental conditioning

Specifies whether released, sown or transplanted individuals benefited from a pre-RST (release/sowing/transplantation) environmental conditioning (e.g., young plants in pots outdoor at the hosting site, animals in competitive conditions…).

List of possible answers:

- **All**

- **Some**

- **None**

Sub-populations delimitation

Specifies whether the biological material was translocated according a spatial design which delimited subpopulations within the translocated population.

List of possible answers:

- **Yes**
- **No**

Technical details

Specifies, with the prospect of future translocations, the level of technical/methodological details available for this translocation in the documents used for the database and freely available.

List of possible answers:

- **Very detailed**
- **Fairly detailed**
- **Moderately detailed**
- **Briefly detailed**
- **Unknown**

Temporal RST* spread

Specifies the time spread between first and last RST (release/sowing/transplantation) among different possibilities.

List of possible answers:

- **No time spread**: no more than one week between the first and the last RST.
- **Weeks**: more than one week separating the first and the last RST.
- **Months**: more than one month separating the first and the last RST.
- **Years**: more than one year separating the first and the last RST.

Number of RST interventions

Gives the number of RST (release/sowing/transplantation) interventions that occurred from the beginning to the end (or to the most recent information) of the translocation program.

Total number of individuals

Gives the total number of individuals released, sown and transplanted over all life-cycle stages and all RST interventions in the translocated population.

Post RST interventions

Specifies whether the translocated population benefited from any post-RST management among different possibilities.

List of possible answers:

- **Care**: if some individuals released, sown, or transplanted benefited from post-RST care consisting of - release interventions consisting of drug treatment.

- **Reproduction**: if some individuals released, sown, or transplanted benefited from post-RST interventions that manipulate their reproduction.

- **Dispersal**: if some individuals released, sown, or transplanted benefited from post-RST interventions that manipulate their dispersal.

- **Environment**: if some individuals released, sown, or transplanted benefited from interventions on their environment such as:

  - **nutrients**: a supply of nutrients (water, minerals, solid foods ...),

  - **regulation**: a regulation of competitors, predators, parasites (cuts, opening of the environment, phytosanitary treatment…),

  - **other**: another type of intervention on the environment,

  - **several**: several types of intervention on the environment.

Remarks on methods

Any useful remark not included elsewhere and related to the manipulation of translocated individuals before, during or after their release, sowing, transplantation, or to actions on their environment.

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11. POST RST MONITORING tab

Observation time spread

Gives the number of years between the first RST (release/sowing/transplantation) intervention and the last monitoring of the population (or of the hosting site in case of extinction) according to the most recent information in the database (see Most recent data in INFORMATION FOR DATA MANAGEMENT BY ADMINISTRATORS).

Abundance

Specifies whether there has been population size estimation at least once during the years that followed the first-RST year (RST=release/sowing/transplantation).

List of possible answers:

- **Yes**

- **No**

Time series

Specifies whether there has been population size estimation at least twice during two different years that followed the first-RST year (RST=release/sowing/transplantation).

List of possible answers:

- **Yes**

- **No**

Founder demography

Specifies whether there has been monitoring of founder (translocated) individuals allowing to calculate at least one demographic rate (survival or fecundity) between years, whatever this rate has explicitly been given in a document or not.

List of possible answers:

- **Yes**

- **No**

- **NA**: Not applicable because the population went extinct too quickly for such monitoring.

Descendance demography

Specifies whether there has been monitoring of descendants of founder (translocated) individuals allowing to calculate at least one demographic rate (survival or fecundity) between years, whatever this rate has explicitly been given in a document or not.

List of possible answers:

- **Yes**

- **No**

- **NA**: Not applicable because the population went extinct too quickly for such monitoring.

Population viability analysis

Specifies whether there has been a Population Viability Analysis of the translocated population (for details, see the Box on population viability in the 'Precisions about which translocated populations can be included in the database and which populations cannot, according to translocation type' in the Welcome page; for further details, see e.g. Beissinger and McCullough 2002).

List of possible answers:

- **Yes**

- **No**

- **NA**: Not applicable because the population went extinct too quickly for such monitoring.

Observation year 0

Indicates if there was a presence-absence monitoring of the translocated population at least once in the calendar year of any RST (release/sowing/transplantation), at least 1 month after the RST intervention.

List of possible answers:

- **Yes**

- **No**

Observation year y+1

Indicates if there was a presence-absence monitoring of the translocated population at least once in the calendar year following any RST (release/sowing/transplantation).

List of possible answers:

- **Yes**

- **No**

Observation year ≥y+2

Indicates if there was a presence-absence monitoring of the translocated population at least once in the second calendar year following any RST (release/sowing/transplantation), or in subsequent years.

List of possible answers:

- **Yes**

- **No**

Observation year ≥y+5

Indicates if there was a presence-absence monitoring of the translocated population at least once in the fifth calendar year following any RST (release/sowing/transplantation), or in subsequent years.

List of possible answers:

- **Yes**

- **No**

Remarks on monitoring

Any useful remark not included elsewhere on monitoring.

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12. RESULTS tab

Founder reproduction

Specifies whether a progeny (seeds, seedlings, new separated ramets, babies, juveniles…) of the founders has been observed in the case such a progeny has been sought.

List of possible answers:

- **Yes**

- **No**

- **NA**: Not applicable because the population went extinct too quickly for such monitoring.

Descendance reproduction

Specifies whether a progeny (seeds, seedlings, new separated ramets, babies, juveniles…) of the descent of the founders has been observed in the case such a progeny has been sought.

List of possible answers:

- **Yes**

- **No**

- **NA**: Not applicable because the population went extinct too quickly for such monitoring.

Dispersal

Specifies whether migration to any other hosting site has been observed, likely due to dispersal from the translocated population (e.g. colonization of a close pond for aquatic plants, of new cliffs for cliff-dwelling birds…).

List of possible answers:

- **Yes**

- **No**

Mortality causes

Gives any likely cause of mortality of translocated individuals.

Population viability evaluation

Gives an evaluation of the viability of the translocated population.

List of possible answers:

- **Positive**: if the population has been deemed viable by scientists and / or experts.

- **Negative**: if it was deemed not viable.

- **Uncertain**: if scientists and / or experts have expressed the opinion that viability could not be judged, or if divergent opinions have been expressed on this point.

- **Not expressed**: no judgment was expressed on the viability of pop.

Ecosystem consequences

Specifies if particular consequences of the translocation on the ecosystem have been noticed.

List of possible answers:

- **Yes**

- **No**

- **Uncertain**: if scientists and / or experts have expressed divergent opinions on this point.

Socio-ecosystem consequences

Specifies particular consequences of the translocation on the socio-ecosystem have been noticed.

List of possible answers:

- **Yes**

- **No**

- **Uncertain**: if scientists and / or experts have expressed divergent opinions on this point.

Details on consequences

Literally indicates the consequences observed on the ecosystem or socio-ecosystem.

Experimental benefit evaluation

Gives an evaluation of the experimental returns of the translocation.

List of possible responses:

- **Positive**: the translocation was found to be beneficial in that it provided substantial information on the ecology of the taxon, allowing to improve future translocations or the conservation of extant populations

- **Negative**: in the opposite case (when, for example, the translocation provided little information while resulting in a loss of biological material available for future translocations).

- **Uncertain**: the experimental benefit of the translocation is considered uncertain or opinions differ on this point.

- **No consequence**: there is no significant consequence of translocation on this experimental aspect (knowledge acquisition and loss of biological material negligible).

- **Not expressed**: no judgment expressed on this point.

Ecosystem benefit evaluation

Gives an evaluation of the ecosystem impacts of the translocation.

List of possible responses:

- **Positive**: The translocation has modified the ecosystem in a positive sense.

- **Negative**: The translocation has modified the ecosystem in a negative sense.

- **Neutral**: The translocation has modified the ecosystem in a sense considered neither positive nor negative.

- **Uncertain**: It is considered uncertain or opinions differ as to whether the modification of the ecosystem resulting from the translocation is favorable or unfavorable.

- **Not expressed**: No judgment expressed on this point.

- **NA**: Not applicable because there have been no ecosystem consequences of the translocation (see the 'Ecosystem consequences' field).

Socio-ecosystem benefit evaluation

Gives an evaluation of the socio-ecosystem impacts of the translocation.

List of possible responses:

- **Positive**: The translocation has modified the socio-ecosystem in a positive sense.

- **Negative**: The translocation has modified the socio-ecosystem in a negative sense.

- **Neutral**: The translocation has modified the socio-ecosystem in a sense considered neither positive nor negative.

- **Uncertain**: It is considered uncertain or opinions differ as to whether the modification of the socio-ecosystem resulting from the translocation is favorable or unfavorable.

- **Not expressed**: No judgment expressed on this point.

- **NA**: Not applicable because there have been no socio-ecosystem consequences of the translocation (see the 'Socio-ecosystem consequences' field).

Remarks on results

Any useful remark not included elsewhere on results.

Table

This table gives details on the occurrence and abundance of the translocated population. Observation periods are the same as in the 'Post-RST monitoring' tab. When no monitoring was made on a given observation period, **NA** (Not applicable) appears in the corresponding occurrence column.

Absolute/Relative: specifies for each number if this number qualifies the absolute abundance (i.e. the actual population size) or if it is a relative proxy or index of an unknown proportion of the abundance.

Observed/Estimated: specifies for each number (whatever absolute or relative) if it results from direct counts or involves any method of estimation.

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13. BIBLIOGRAPHY tab

Lists the documents (scientific articles, book chapters, reports, web pages, interviews, etc.) giving information about the translocated population.

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14. CHARTS tab

Here are details on the available and missing information about the translocated population. You can click, e.g., on the 'Unavailable' bar and get the list (in the table below the figure) of the fields of the database for which no information is available for this population.

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15. RELEASE, SOWING, TRANSPLANTATION (RST) tab

The table gives details on the number of individuals that were released, sown, or transplanted per life-cycle stage, per year, and per location (in the case where different RST locations can be considered for a single translocated population).

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16. POPULATION SIZE tab

The table gives details on the translocated population size (including translocated individuals, their descent, individuals already present in the population before the translocation in the case of a reinforcement, and new natural immigrants), per life-cycle stage and per year.

References

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