

CWR in EURISCO

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Interim Technical Report for The Netherlands

Centre for Genetic Resources, the Netherlands (CGN), June 14th 2023.

Summary

CGN has been very productive in the preparation of the CWR-NI for The Netherlands. A first draft is ready containing 1912 records including 298 populations of threatened populations and 1614 occurrences of common species in flora districts. On the basis of this CWR-NI a file is created in Excel that complies to the specifications of the EURISCO upload format. As such CGN is available for testing the upload interface as soon as it becomes available.

Report

According to the workplan, the activities were divided in five steps. These will be used to describe the status quo.

1 Identify priority taxa and populations

The prioritisation of CWR in the Netherlands was done prior to the start of the current project. Based on varies well defined criteria a list of species were identified (1), and prioritized based on niche analysis using two climate change scenarios (2). This resulted in a list with CWR that needed attention since they were under threat of erosion.

In addition to this analysis, within the project it was decided to also find a solution for common CWR species. Therefore it was decided to create an overview of the occurrence of all identified CWR species in the Netherlands in all of the 14 'flora districts'. These districts, also called plant geographic districts are areas with similar ecogeographic and associated floras. To give future potential users the opportunity to see that specific CWR species occur in specific flora districts in the Netherlands, and give them the opportunity to request and obtain this material, it was decided to include one record per CWR species/flora district combination in the CWR-NI.

2 Prepare the national database structure

Based on the 'Principles for the Inclusion of CWR Data in EURISCO' (3) a selection of descriptors for the CWR-NI was made.

Following descriptors were included:

POPID	Population ID generated by the CWR-NI, starting with 'NLDCWR' followed by a four digit unique number
TAXONID	The 'Nomen number' of the taxon as listed in GRIN-Taxonomy (https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch)
FAMILY	Family name of the taxon
GENUS	Genus name of the taxon
SPECIES	Species name of the taxon
SPAUTHOR	The authority for the species name of the taxon
SUBTAXA	Any additional infraspecific epithet of the taxon
SUBTAUTH	The authority for the additional infraspecific epithet of the taxon
USE_VALUE	The potential use of the population: as crop wild relative (CWR) and/or as wild food plant (WFP)
RELATEDCROP	The taxon of the related crop(s)
GENEPOOL	The gene pool (related to the closest related crop): GP1, GP2 or GP3
NATIONAL_CAT	The Red List category of the population: endangered (EN), vulnerable (VU), near threatened (NT), least concern (LC) or data deficient (DD)
LEGSTATUS	The legal status of the population, informs whether the taxon is legally protected at the European, national or subnational levels: habitats directive (HAB) or national level (NAT)
OBSDATE	The most recent date the population was observed. Format YYYYMMDD, use zero's when unknown.
SAMPSTAT	Sample status: wild (100) including natural (110), semi-natural/wild (120) and semi-natural/sown (130), and weedy (200)
MNGINSTCODE	FAO WIEWS code of the institution responsible for the population (e.g. protected area authority, nature reserve manager, national park manager, private landowner, etc.).

MNGINSTNAME	Name and short address of the institution responsible for the population, to be used if the previous file is empty.
LIAISONCODE	FAO WIEWS code of the institution that can liaise between the organization managing the CWR population and the interested user to facilitate access to the material.
LIAISONNAME	Name, and brief address, of the institution that can liaise between the organization managing the CWR population and the interested user.
OTHERNUMB	Any other identifiers known to exist in ex situ collections for this population. INSTCODE and identifier are separated by a colon without space. Pairs of INSTCODE and identifier are separated by a semicolon without space.
ORIGCTY	Country where the CWR population was observed or inventoried. Use the Three-letter ISO 3166-1 code of the country where the site is located.
FLORADISTRICT	The floradistrict in which the population occurs
OCCURSITE	Location of the population
DECLATITUDE	Latitude of the site expressed in decimal degrees. Positive values are north of the Equator; negative values are south of the Equator (e.g. -44.6975).
DECLONGITUDE	Longitude of the site expressed in decimal degrees. Positive values are east of Greenwich Meridian; negative values are west of Greenwich Meridian (e.g. -120.9123).
COORDUNCERT	Uncertainty associated with the coordinates in metres. Leave the value empty if the uncertainty is unknown.

3 Organize the network of data providers

In the approach CGN followed this step was not necessary. However, in parallel to the project other CGN projects have elements in which nature conservation organisation are approached to raise awareness about CWR and formulate agreements regarding back-up of the populations and possibly access and potential use of the material.

4 Collect and organize the data according to the agreed principles and data exchange format

Based on the work done previous to the project, information about the 'threatened' CWR populations was included in the CWR-NI resulting in 298 records.

Data about the occurrence of the other 170 CWR in flora districts was collected using various descriptions and maps. This data was entered in a matrix in Excel, and later transformed to one record per species and occurrence, resulting in 1614 records.

The in total 1912 records were given sequential population id's, to be used as accession numbers, in the form of 'NLDCWR' followed by a four digit number, eg 'NLDCWR0296'.

Various data points could still be added, such as the managing institute, that is currently not known. Opportunities will be sought to efficiently add these to the threatened populations, as for the flora districts this makes no sense.

By using various simple functions in Excel, the data were transferred into another sheet where they appeared in the EURISCO upload format. It was decided not to share the exact locations (the gps coordinates) of the threatened species, and since the common species did not come with coordinates, the data ready to be uploaded do not contain any coordinates. All other data was shared if they occurred in the upload format.

5 Provide the data to EURISCO

CGN has offered IPK to function as a testing site. The data are ready to be uploaded and as soon as the upload mechanism is ready CGN will test it.

References

- (1) van Treuren R, Hoekstra R, van Hintum TJL (2017) Inventory and prioritization for the conservation of crop wild relatives in The Netherlands under climate change. *Biological Conservation* 216: 123-139
<https://doi.org/10.1016/j.biocon.2017.10.003>
- (2) van Treuren R, Hoekstra R, Wehrens R, van Hintum TJL (2020) Effects of climate change on the distribution of crop wild relatives in the Netherlands in relation to conservation status and ecotope variation. *Global Ecology and Conservation* 23: e01054. <https://doi.org/10.1016/j.gecco.2020.e01054>
- (3) van Hintum TJL, Iriondo, JM (2022) Principles for the Inclusion of CWR Data in EURISCO. ECPGR publication. 30p.