



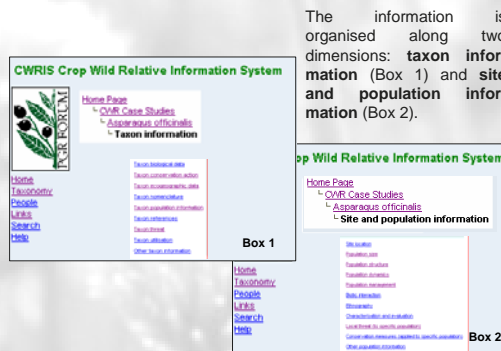
The PGR Forum Crop Wild Relative Information System (CWRIS): Information management for CWR populations, illustrated with case studies

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Purpose of CWRIS

The PGR Forum Crop Wild Relative Information System (CWRIS) is an online information management system specifically designed to facilitate CWR conservation and use. CWRIS has two main dimensions: the CWR Catalogue for Europe and the Mediterranean, containing more than 23,000 species and in excess of 243,000 distribution records, and the CWR descriptors for management of taxon data, including detailed site and population data. Aiming to serve a diverse range of user communities, including conservationists, plant breeders, policy-makers and protected area managers, great care has been given to data standardisation. Several case studies have been developed by PGR Forum participants to test CWRIS and some snapshots are shown here to provide a sample of the capabilities of CWRIS for management of conservation data.

Structure of the CWR descriptors



Utilisation: a defining characteristic of crop wild relatives

A defining attribute of a CWR is its utilisation. This can be direct, for example as wild salad, or indirect, as potential breeding material for the target crop. The relationship of the CWR to the associated crop is therefore an essential piece of information that is included in the CWRIS descriptors. The information given under **taxon utilisation** is shown (Box 3) for *Beta vulgaris* subsp. *maritima* (L.) Arcangelii, wild or sea beet (Data: L. Frese).

Uses/Ethnobotany	Gene source: disease resistance genes; food: leaf vegetable
Target crop	Sugar beet
In breeding programmes	
Degree of relationship to crop	Primary gene pool

Box 3

Threat

Box 4

Home Page
 CWR Case Studies
 Arnica montana L.
 Taxon information
 Taxon threat

Threats 1.1.5. habitat loss: abandonment
 Red list assessment Norway: National Red List: DC Declining, care demanding

Threats 3.2. harvesting: over-collecting, 1. habitat damage
 Red list assessment Lithuania: National Red List (2003): vulnerable

Box 5

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 CWR Case Studies
 Asparagus officinalis
 Site and population information
 Local threat: site specific populations

Original source of data
 Distribution and population sizes of Asparagus officinalis Dumort., Wild Asparagus, in Britain

Site location Port Eynon
 Threat category 7.2 Natural disasters Storms and floods; 10.1 Human disturbance: Tourism
 Threat reason Population may have been reduced by collecting in the past

Threats are documented at two levels in CWRIS: for the taxon across its whole distribution or for a population of the taxon at a specific location. The threats are categorised according to the IUCN Threat Authority File.

The example of *Arnica montana* L. (Box 4) has multiple entries for taxon threat: the data for Norway provided by A. Asdal, for Lithuania by J. Labokas. For *in situ* conservation management of threatened species it is crucial to know the **local threats** to a particular population. The species illustrating this is the Western European maritime endemic *Asparagus officinalis* subsp. *prostratus* (Dumort.) Corb. Local threats to this species at a particular site, Port Eynon, Wales, are shown in Box 5 (Source: Rich *et al.* 2002). The same IUCN threat standards are used here to classify the local threats.

For a full insight into the capabilities of CWRIS for management of CWR information, or to browse the CWR Catalogue for Europe and the Mediterranean, visit: <http://www.pgrforum.org/cwr/htm>

Site location information

Box 6 shows three of the **site locations** in the Czech Republic, where the near-threatened *Allium schoenoprasum* subsp. *sibiricum* (L.) Richter occurs.

In addition to location details, the webpage with the overview of the **site locations** gives as the original source of the data the Czech National Phytosociological Database, made available by Z. Stehno. In the **Site location** table, for each location, habitat type, vegetation types and soil information are documented as shown (Box 7) for a site near Cañamares, Spain, one of a total of two locations of the Spanish endemic *Erodium paularense* Fern. Gonz. & Izco. The total population of this endangered species is 200 000 plants, divided over 5 populations. (Data by J. Iriondo)

Box 6

Home Page
 CWR Case Studies
 Allium schoenoprasum subsp. sibiricum
 Site location information
 Site location

Country	Administrative unit	Named area	Nearest named place
Czech Republic	Středočeský územní úřad	Ústí nad Labem	
Czech Republic	Středočeský územní úřad	Ústí nad Labem	
Czech Republic	Středočeský územní úřad	Ústí nad Labem	

Box 7

Home Page
 CWR Case Studies
 Erodium paularense
 Site and population information
 Site location

Country	Spain
Administrative unit	Castilla-La Mancha
Named area	
Nearest named place	Cañamares
Soil texture	fine, sandy
Soil moisture regime	
Soil depth	5 - 10 cm
pH	6.0 - 6.5
Percentage organic matter... elements	
Salinity	280 - 580 us/cm

Population information

For every site location, the population should be documented for **population size**, **population structure** and **dynamics**, **population management**, etc. For some species this level of detail is available. The **population dynamics** data shown in Box 8 below were part of the preparation of the UK Biodiversity Action Plan for *Asparagus officinalis* subsp. *prostratus* (Dumort) Corb., which is known to have 28 populations in the UK and a total population size of only 1200 plants (Rich *et al.* 2002).

References:
 Rich, T.C.G., I.J. Bennallick, L. Cordrey, Q.O.N. Kay, A.J. Lockton and L.K. Rich (2002) Distribution and population sizes of *Asparagus prostratus* Dumort., Wild asparagus in Britain. *Watsonia*, 24 (2): pp 183 - 192

Box 8

Home Page
 CWR Case Studies
 Asparagus officinalis
 Site and population information
 Population dynamics

Other information
 Distribution and population sizes of Asparagus prostratus Dumort., Wild Asparagus, in Britain

Original source of data
 Distribution and population sizes of Asparagus prostratus Dumort., Wild Asparagus, in Britain

Survey first or sequence.. date 1996; several; 2001: 2 clumps
 Trend unlikely to survive because of small population size
 Site location Darviss Point

