# Examples of converting monitoring units to individuals for Article 17 reporting

**Example 1: converting 1x1 grids to individuals for Botrychium simplex**

*Botrychium simplex* (a perennial moonwort) has records from 7 to 16 1x1 km2 grids. The uncertainty in the number of grids depends on the number of sites that have actual populations. *Botrychium* *simplex* is a very rare moonwort in Europe and the number of individuals (sporophytes that are seen above ground) varies a lot between years. Some years several hundred can be found; the species could also be dwelling below ground for several years with no above ground signs.

The example below describes a situation where a high number of plants has not been observed in recent years and where just a few sites have been visited.

Approximation:

The number of sites per 1x1 km2 is 1 or 2, but with the uncertainty the approximation is 2 sites per grid which gives 14-32 sites (i.e. 7 – 16 1x1 grids).

Some sites had been visited without any records for decades, so the species is assumed extinct in those sites, which lowered the maximum number of sites by 4 (14-28 sites)

At a maximum, 100 specimens have been found on any site, but the normal situation is just a few individuals to be found on each site.

* 25% (3 or 7 sites) of the sites could have at maximum 100 individuals (10-100).
* 75% (10 or 21 sites) have 1-10 individuals.
* This gives a minimum of 40 (3x10+10x1) and a maximum of 910 (7x100+21x10) individuals, which looks like a reasonable figure based on what is known about the species ecology and life history (i.e. using literature, expert opinion etc).
* Best single value would be closer to 40 than 910 individuals, as few populations have more than 10 individuals, the mean value of 475 is too high, a reasonable best single value, 250 or 300 individuals could be a relevant expert judgement, that will not be far different for a real situation using observed data and information. This conclusion would be based on expert judgement.

**Example 2: Converting localities to individuals for *Pulsatilla patens***

Pulsatilla patens (a perennial vascular plant) is known from at least 35 actual localities (separated by at least 1 km). From most of them there is information from the last 10 years A few sites have been monitored at irregular intervals. One site has the main population. It has been surveyed once, ten years ago.

The largest locality has roughly 100 000–150 000 flowering individuals yearly. The other localities have less than 200 individuals. At only two of those localities more than 100 individuals have been counted during the last 50 years. Most of the localities have less than 10 individuals yearly.

Approximation:

one locality 100 000–150 000, two localities with 50–200, 12 localities with 10–50, and 20 with 5–10 individuals. Gives: 100 320–151 200 individuals – and with some approximation the size class 100 000–500 000 individuals.