

Maps of European Alliances: Examples of Distribution Patterns

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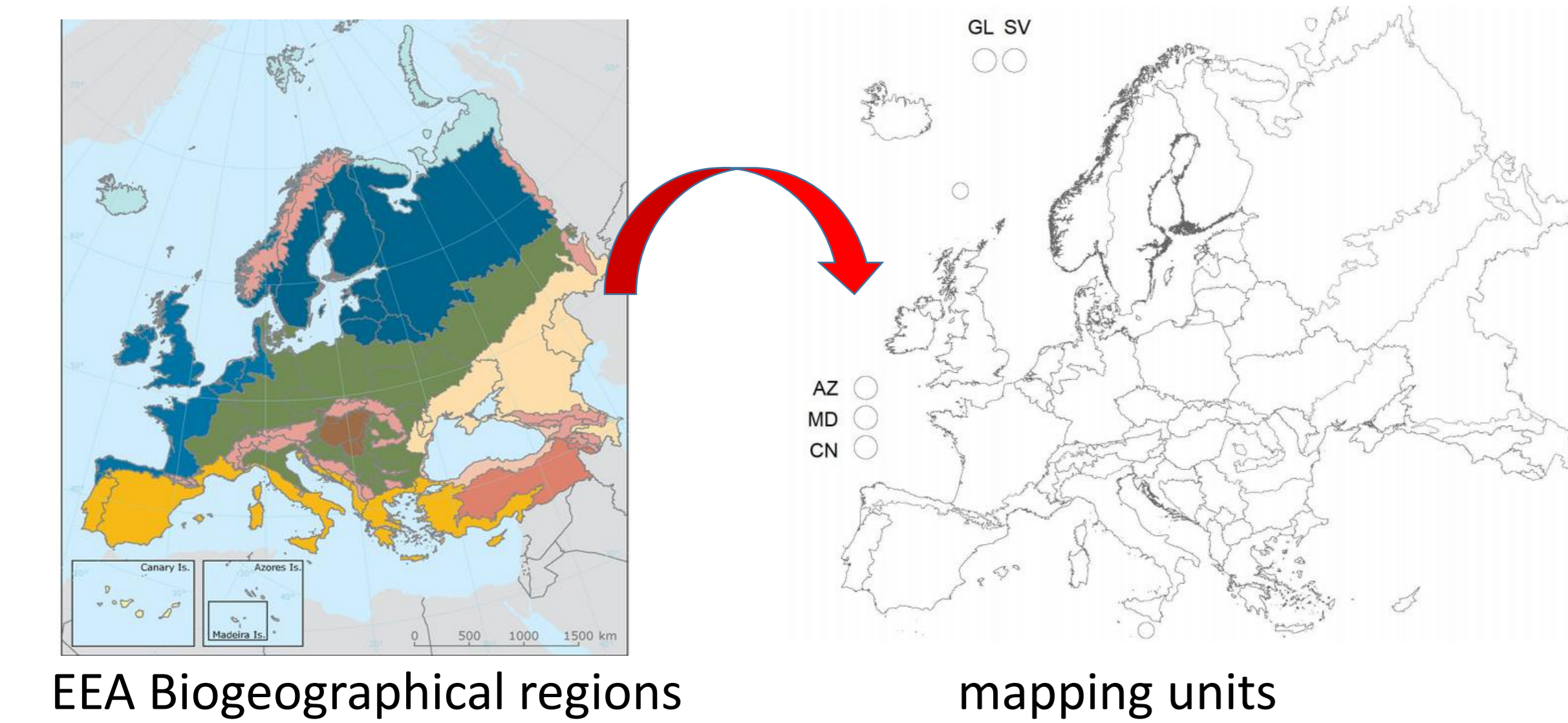
A list including all so far known vegetation types in Europe (EuroVegChecklist), was published with brief descriptions for 1105 vegetation alliances (Mucina et al. 2016), however distribution of many alliances has remained unknown.

Method

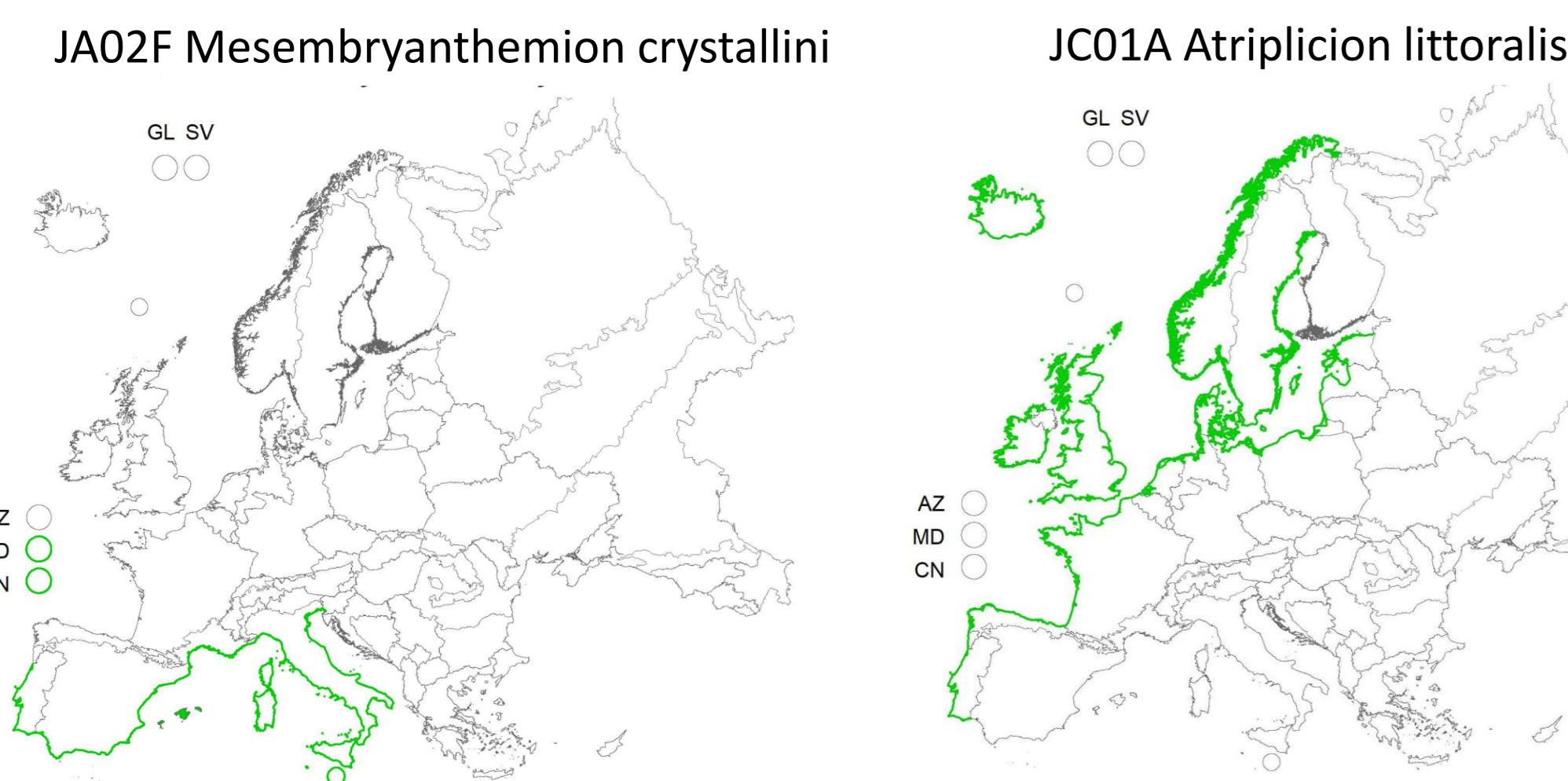
- 1105 alliances from EuroVegChecklist were mapped
- countries, larger islands and archipelagos were taken as basic mapping units
- larger countries were divided into smaller units based on EEA Biogeographical regions
- 53 coastal units were distinguished in coastal mapping units
- 131 mapping units were used in total
- concept of EuroVegChecklist was kept as much as possible

Data sources

- basic database made by Jiménez-Alfaro et al. (2014) was used and extended
- review of national vegetation overviews, habitat catalogues, syntaxonomical checklists and studies
- vegetation databases
- 67 national vegetation experts were involved to correct occurrences of alliances



Examples of mapping of coastal units



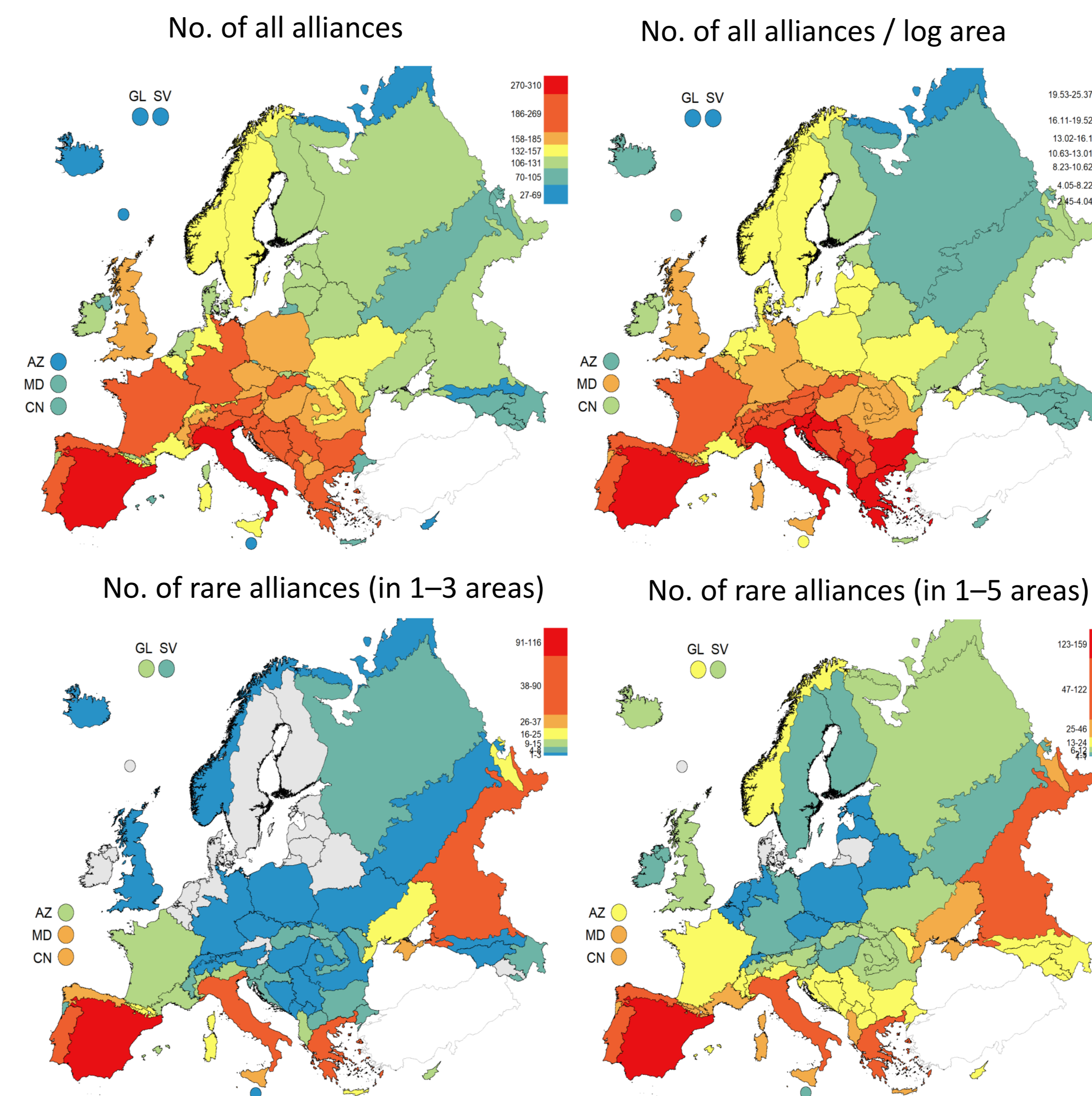
Conclusion

We provided the first baseline of distribution of vegetation alliances across all of Europe. As knowledge on syntaxonomy of some vegetation types is still developing and changing, we plan updates in future according to changes in EuroVegChecklist. The maps will be incorporated in the EuroVegChecklist website <https://www.synbiosys.alterra.nl/evc>. Changes in EuroVegChecklist and in the maps can be added after acceptance by the European Vegetation Classification Committee (<http://euroveg.org/evc-committee>). We appreciate any information on distribution of vegetation types, especially for units coloured as yellow - possible occurrences.

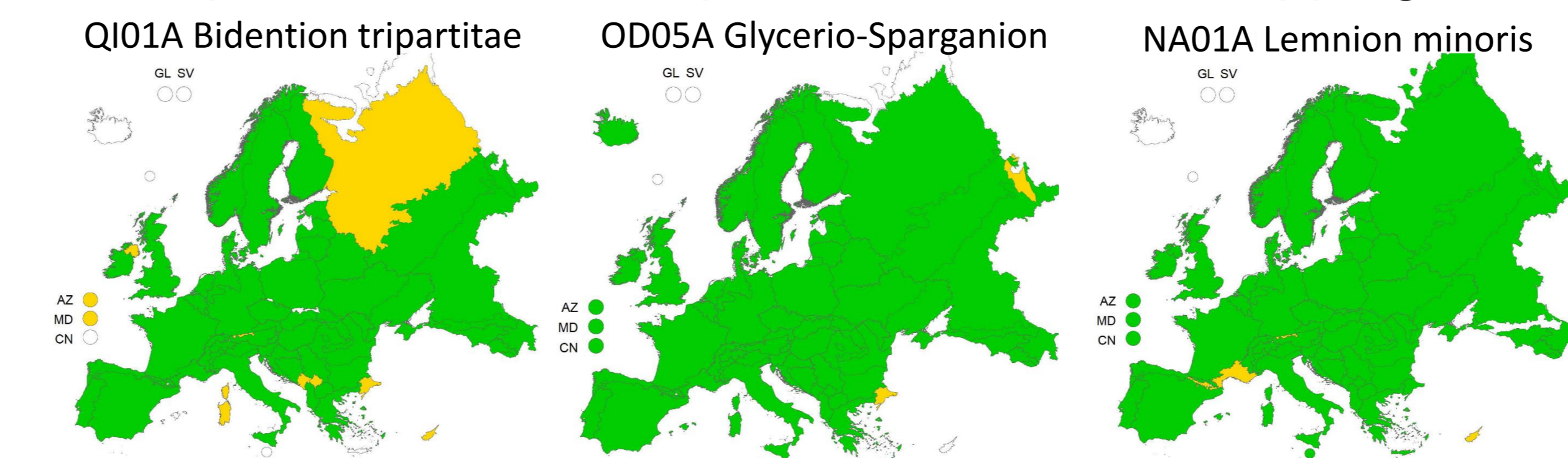
Acknowledgements

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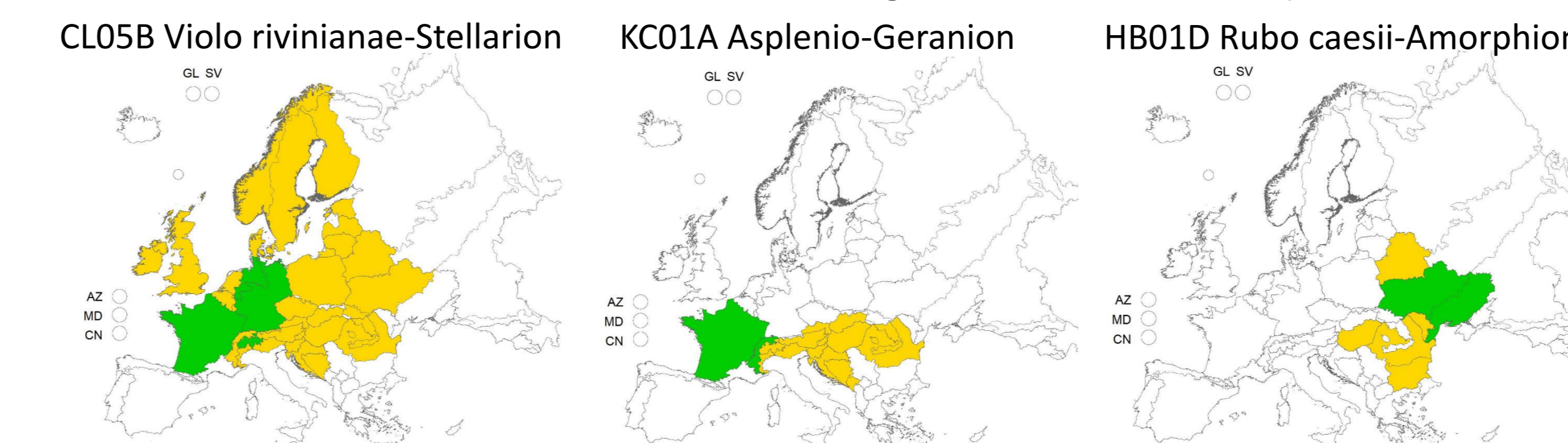
Results



Examples of alliances reported in the most mapping units



Examples of alliances with the highest uncertainty of occurrence



References

- Jiménez-Alfaro, B., Chytrý, M., Rejmánek, M. & Mucina, L. (2014) The number of vegetation types in European countries: major determinants and extrapolation to other regions. *Journal of Vegetation Science* 25, 863–872.
- Mucina, L., Bültmann, H., Dierßen, K., Theurillat, J.-P., Raus, T., Čarni, A. et al. (2016) Vegetation of Europe: hierarchical floristic classification system of vascular plant, bryophyte, lichen, and algal communities. *Applied Vegetation Science* 19 (Suppl. 1), 3–264.

The highest number of alliances occurred in Mediterranean and Submediterranean mapping units in Southern Europe and in the mountain ranges of Central Europe.

Number of alliances decreases towards the north, following geographical pattern of decreasing floristic diversity.

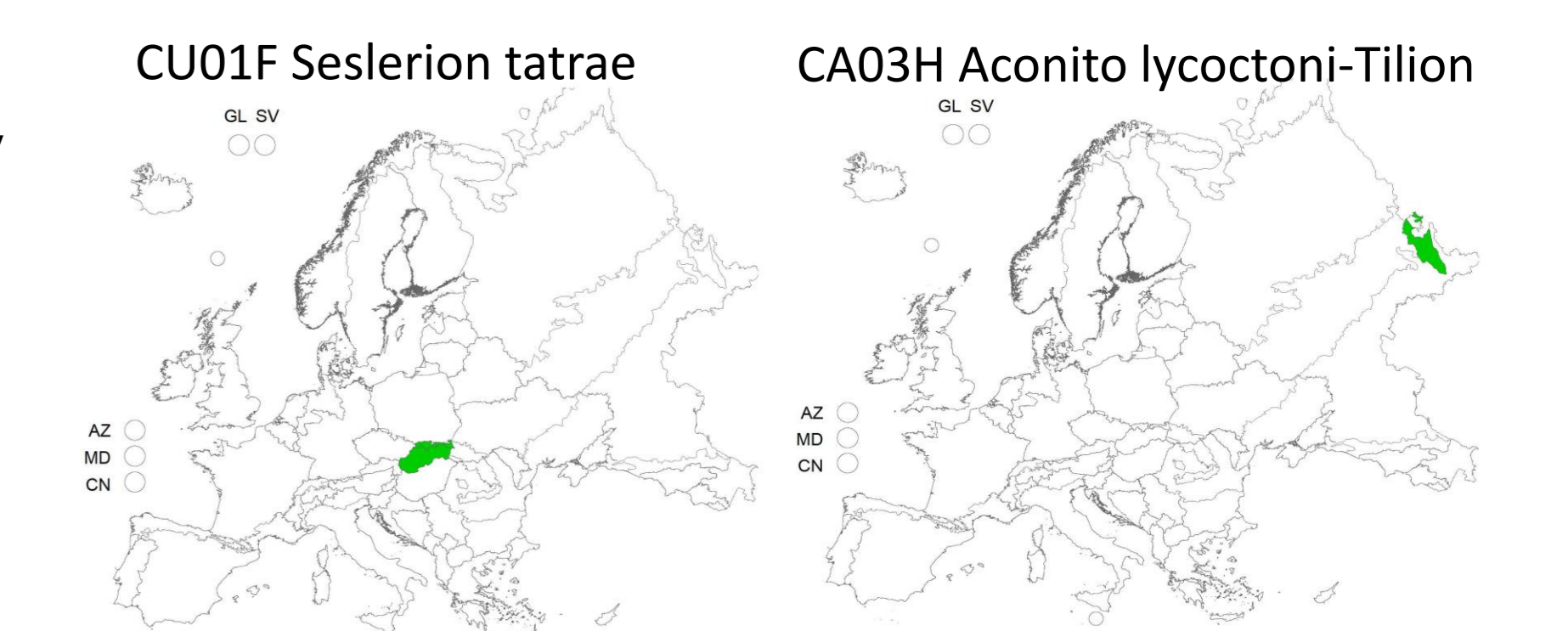
The lowest number of alliances was in all coastal units, Svalbard, Faroe Islands, Cyprus, Russia Arctic, Iceland, Malta, Azores and Greenland.

The highest number of rare alliances is concentrated in Mediterranean mapping units of Southern Europe, the Balkan Peninsula and in the steppic regions of Russia and Ukraine.

Confirmed occurrence
Possible occurrence
Absence

The most frequent alliances are those of aquatic and wetland vegetation. They are ecologically and floristically well defined.

Examples of rare alliances



The highest uncertainty is due to a lack of data or unclear definition and delimitation of the alliances.