Support for the implementation of the ENI-SEIS II East 2017-2018 Regional and National Work Plan in assisting reporting to the Emerald network

Guidance for converting the national distribution data to the Pan-European 10x10km Grid

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Introduction

- The Resolution 8(2012) reporting format requests countries to deliver distribution data at national level under paragraphs:
  - Annex B - 2.3 : for species
  - Annex D – 2.3 : for habitats
  - Annex F – 4.3 : breeding distribution for Birds
- the Group of Experts of Protected Areas under the Bern Convention specifically requested to devellop guidelines for converting national distribution data towards the Pan-European 10x10km grid.
- for Art. 17 and Art. 12 reporting under the EU Nature Directives, no specific guidelines were written.

Annex B: Reporting format for species, except birds

2. Maps	
Distribution of the species within the country concerned	
2.1. Sensitive species	The information provided relates to a species (or subspecies) to be treated as 'sensitive' YES/NO
2.2. Year or period	Year or period when distribution data was collected
2.3. Distribution map	Submit a map together with relevant metadata following the technical specifications in the Explanatory Notes and Guidelines. The standard for species distribution is 10x10km ETRS grid cells, projection ETRS LAEA 5210
2.4. Method used	Select from the following methods: 3 = Complete survey or a statistically robust estimate 2 = Based mainly on extrapolation from a limited amount of data 1 = Based mainly on expert opinion with very limited data 0 = Insufficient of no data available
2.5 Additional map Optional	Country can submit an additional map, deviating from standard submission map under 2.3. and/or a range map

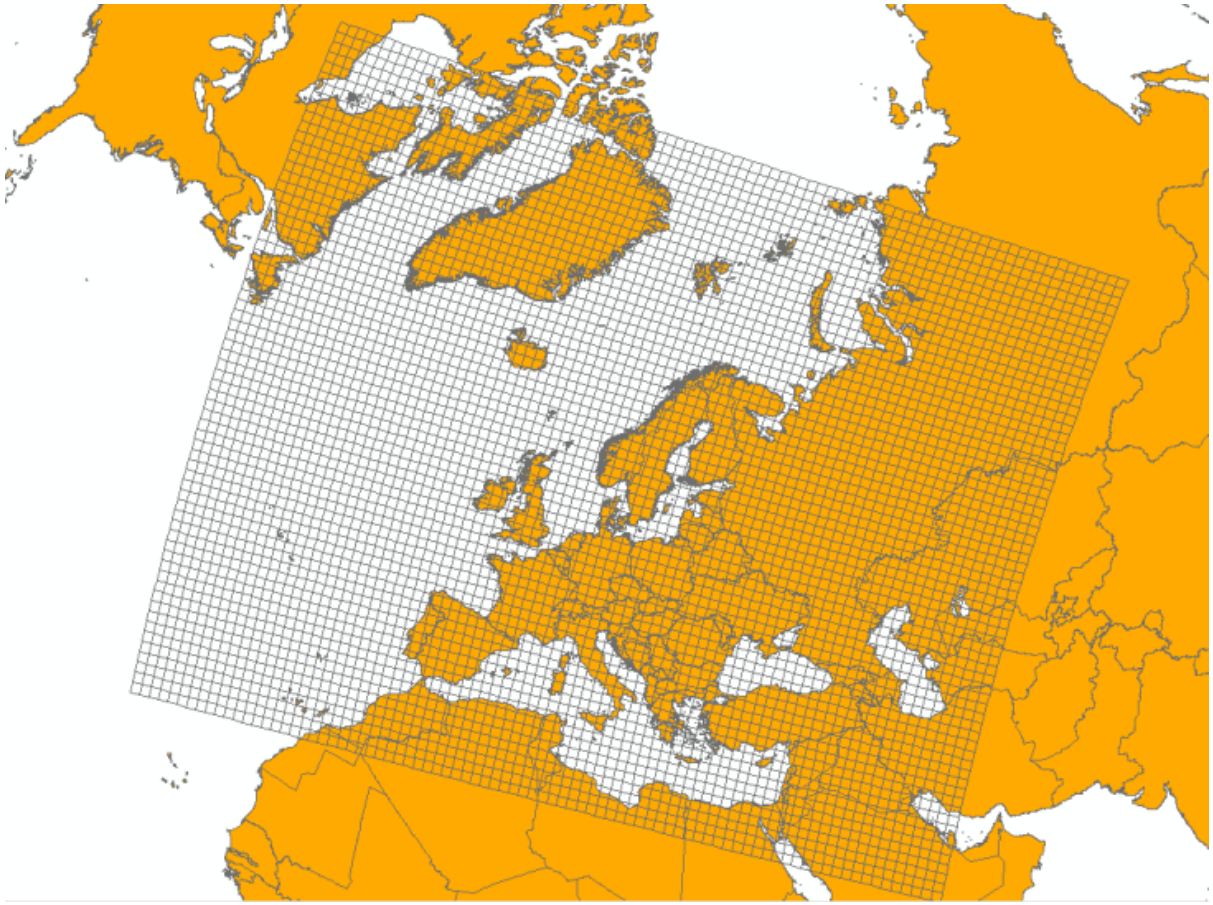
Annex D: Reporting format for habitat types

2. Maps	
Distribution of the habitat type within the country concerned	
2.1 Year or period	*Year or period when distribution data was collected*
2.2 Distribution map	*Submit a map together with relevant metadata following the technical specifications in the Explanatory Notes and Guidelines. The standard for habitat distribution is 10x10km ETRS grid cells, projection ETRS LAEA 5210*
2.3 Method used	*Select one of the following methods:* *a) Complete survey or a statistically robust estimate* *b) Based mainly on extrapolation from a limited amount of data* *c) Based mainly on expert opinion with very limited data* *d) Insufficient or no data available*
2.4 Additional maps *Optional*	*The country can submit an additional map, deviating from standard submission map under 2.2 and/or a range map*

Annex F: Birds: Breeding distribution map and size

4 Breeding distribution map and size	
4.1 Sensitive species	*The information provided relates to a species (or subspecific population) to be treated as 'sensitive' YES/NO*
4.2 Year or period	*Year or period when the breeding distribution data was collected*
4.3 Breeding distribution map	*Submit a map together with relevant metadata following the technical specifications in the Reporting guidelines. The standard for species distribution is the 10x10km ETRS grid cells, projection ETRS LAEA 5210*
4.4 Breeding distribution surface area	*Total surface area of the breeding distribution in km^2*
4.5 Breeding distribution **Method used**	*Select one of the following methods:* *a) Complete survey or a statistically robust estimate* *b) Based mainly on extrapolation from a limited amount of data* *c) Based mainly on expert opinion with very limited data* *d) Insufficient or no data available*
4.6 Additional maps *Optional*	*Countries can submit an additional map, deviating from the standard submission under field 4.3. and/or a range map*
4.7 Sources	*Give bibliographic references, link to Internet sites, expert contact details, etc.* *Free text*
4.8 Additional information *Optional*	*Other relevant information, complementary to the data requested under fields 4.1–4.7 Free text*

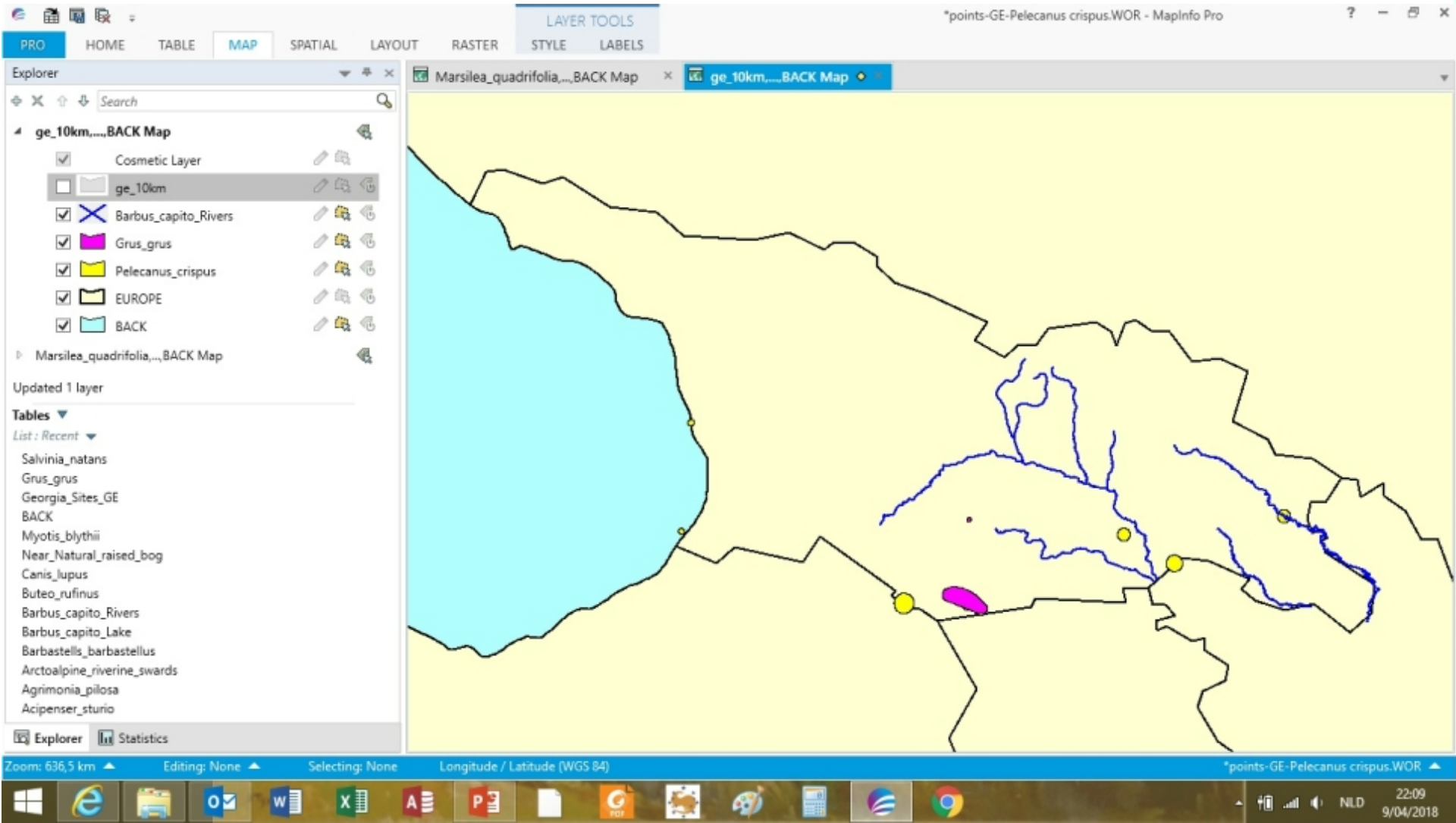
EEA reference grid in the new projection (continental view)



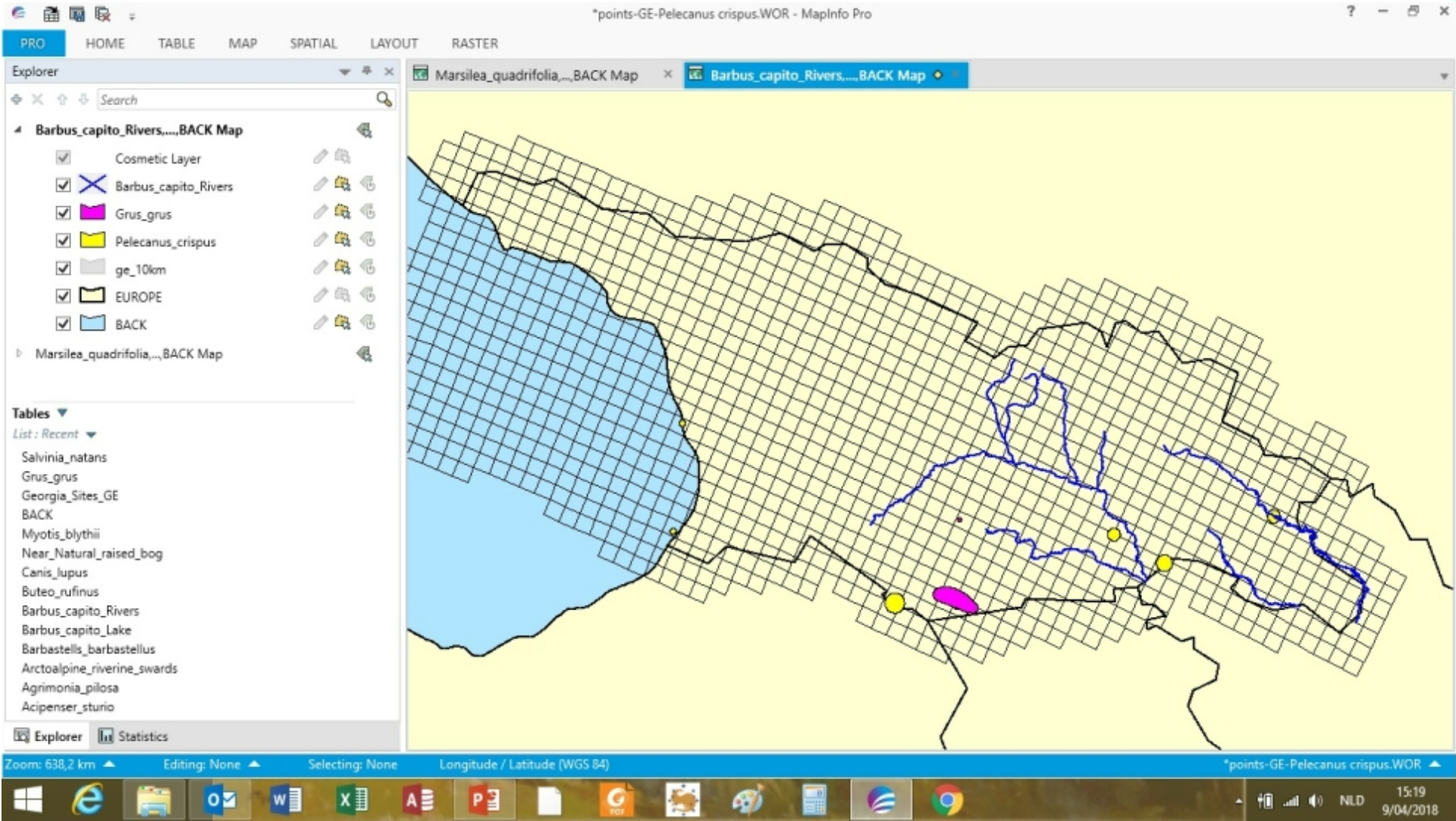
Possible formats for any distribution data at any geographical scale

- Geographical Points
- Lines: e.g. transects, river sections etc …
- Polygons
- Grids of various scales and sizes:
  - Original grid < 10x10km
  - Original grid > 10x10km

Example distribution maps: Georgia



Example distribution maps: Georgia



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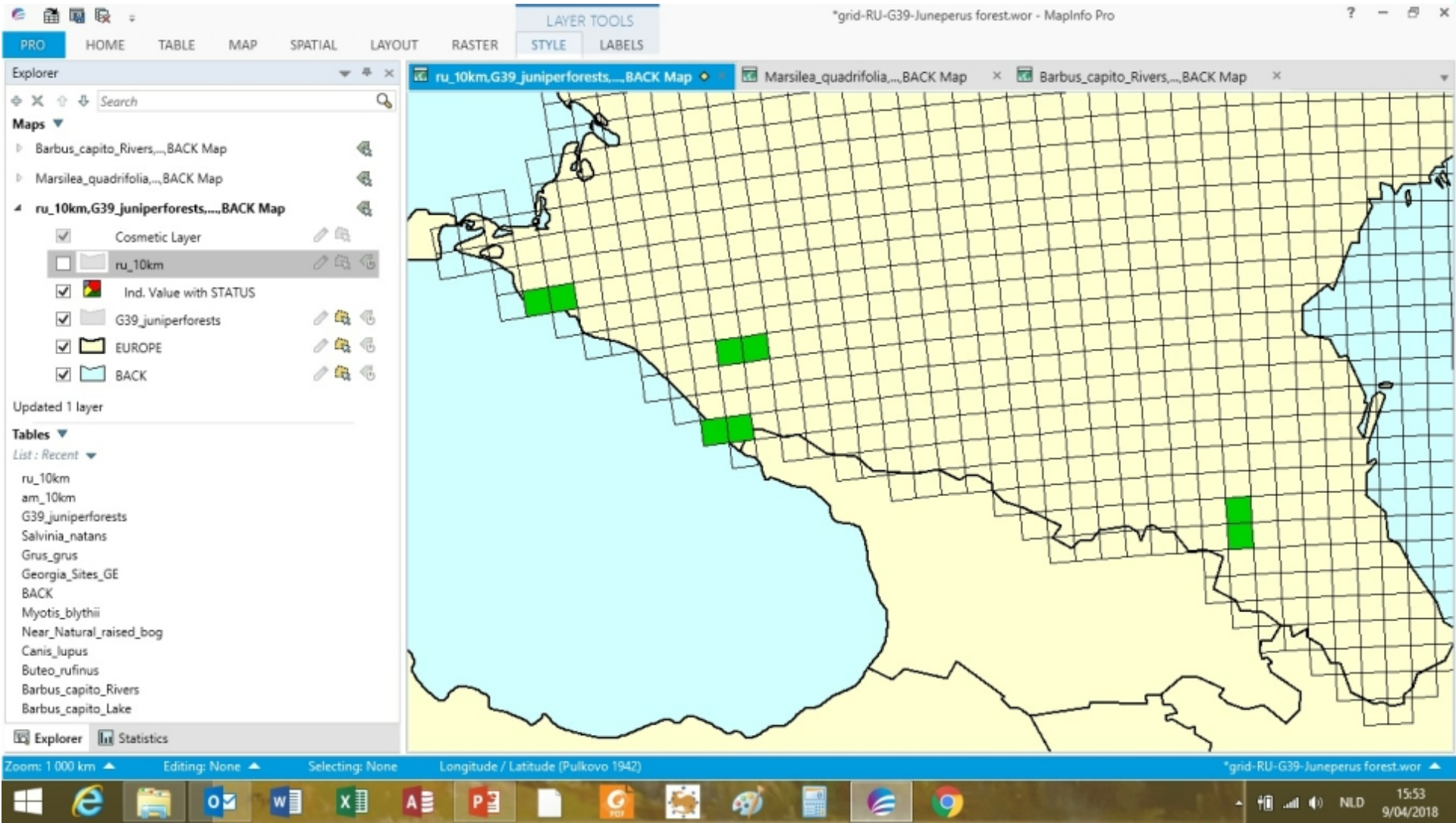
Example map: Russia habitat G3.9 Juniperus forests



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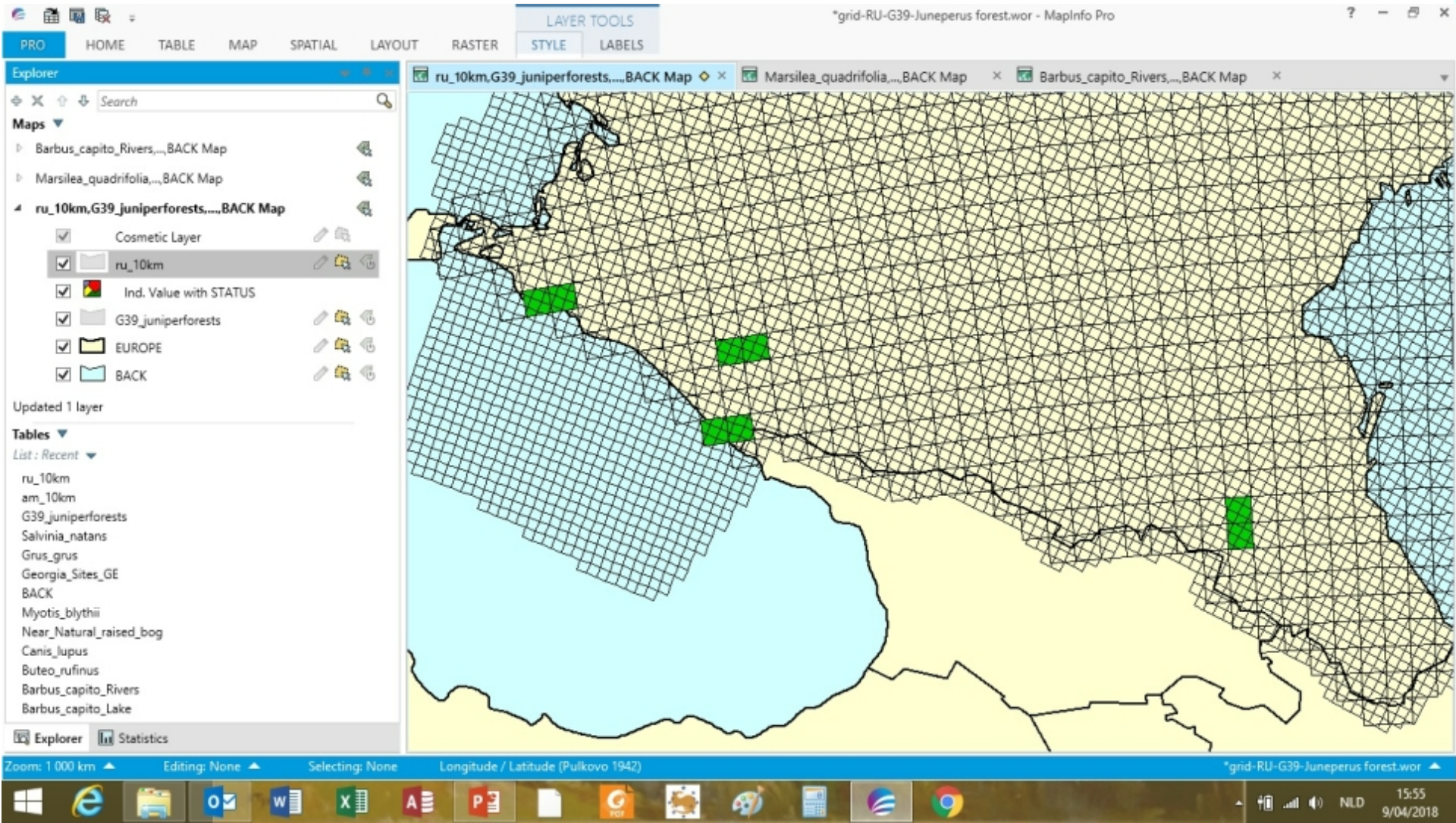
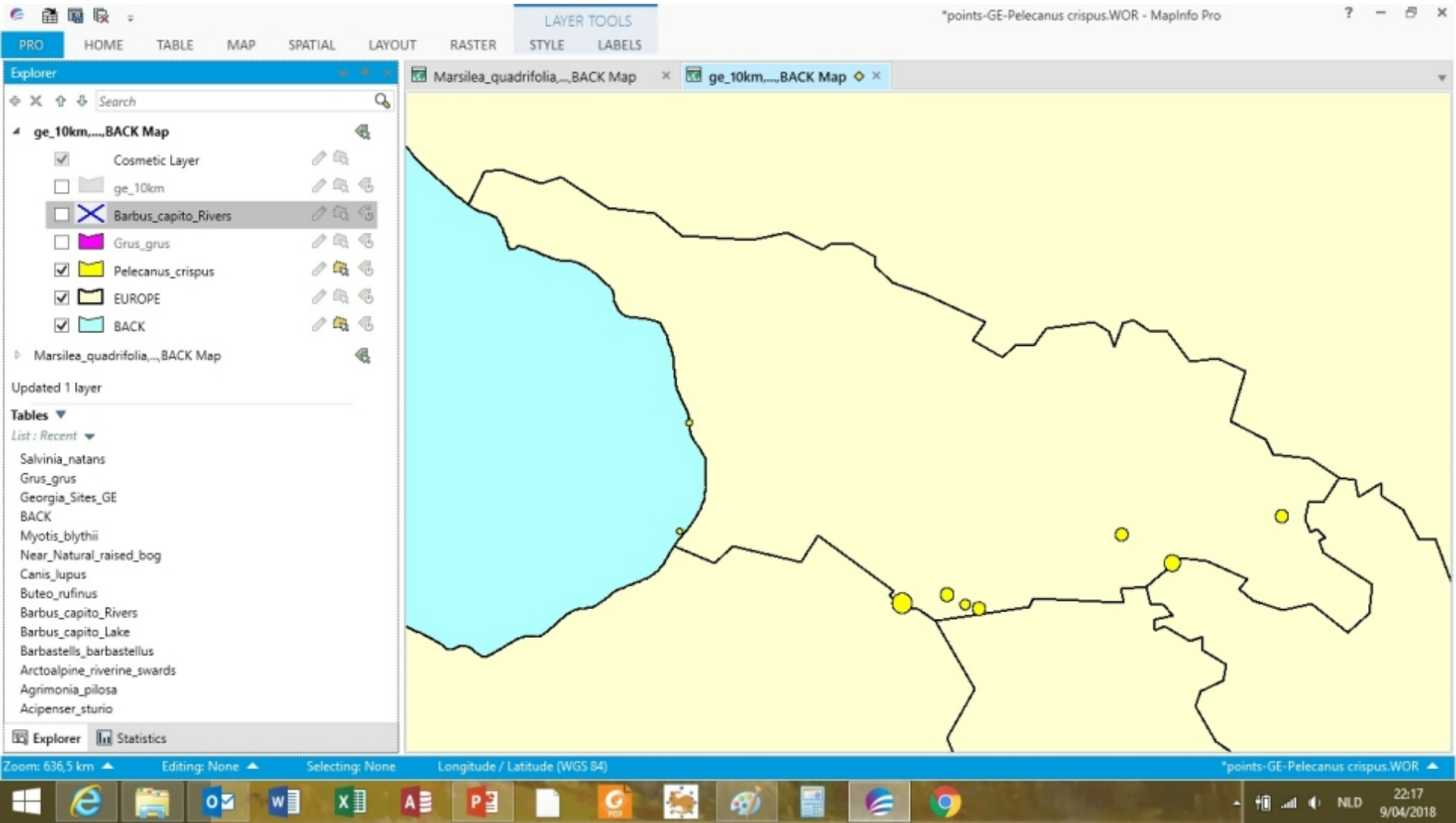


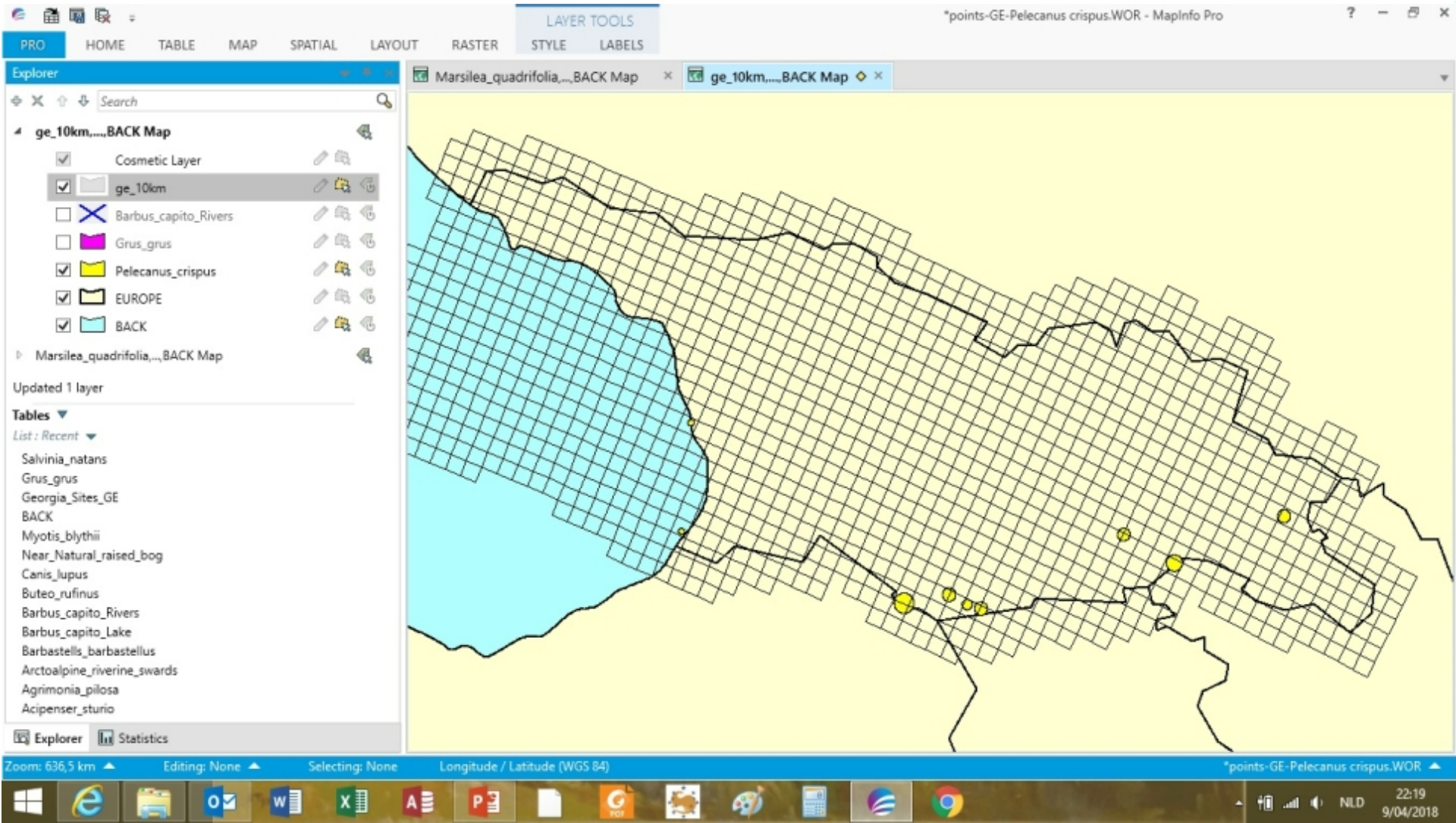
Geographical points

- Indicate the grid cell(s) in which the point(s) is (are) situated
- Please be aware, the request is to create a complete distribution map for the whole country
- This type of data will probably be useful for species and habitats with a (very) limited distribution area or as additional information together with other layers
- e.g. birds with a very restricted number of breeding places

Pelecanus crispus Georgia



Pelecanus crispus Georgia



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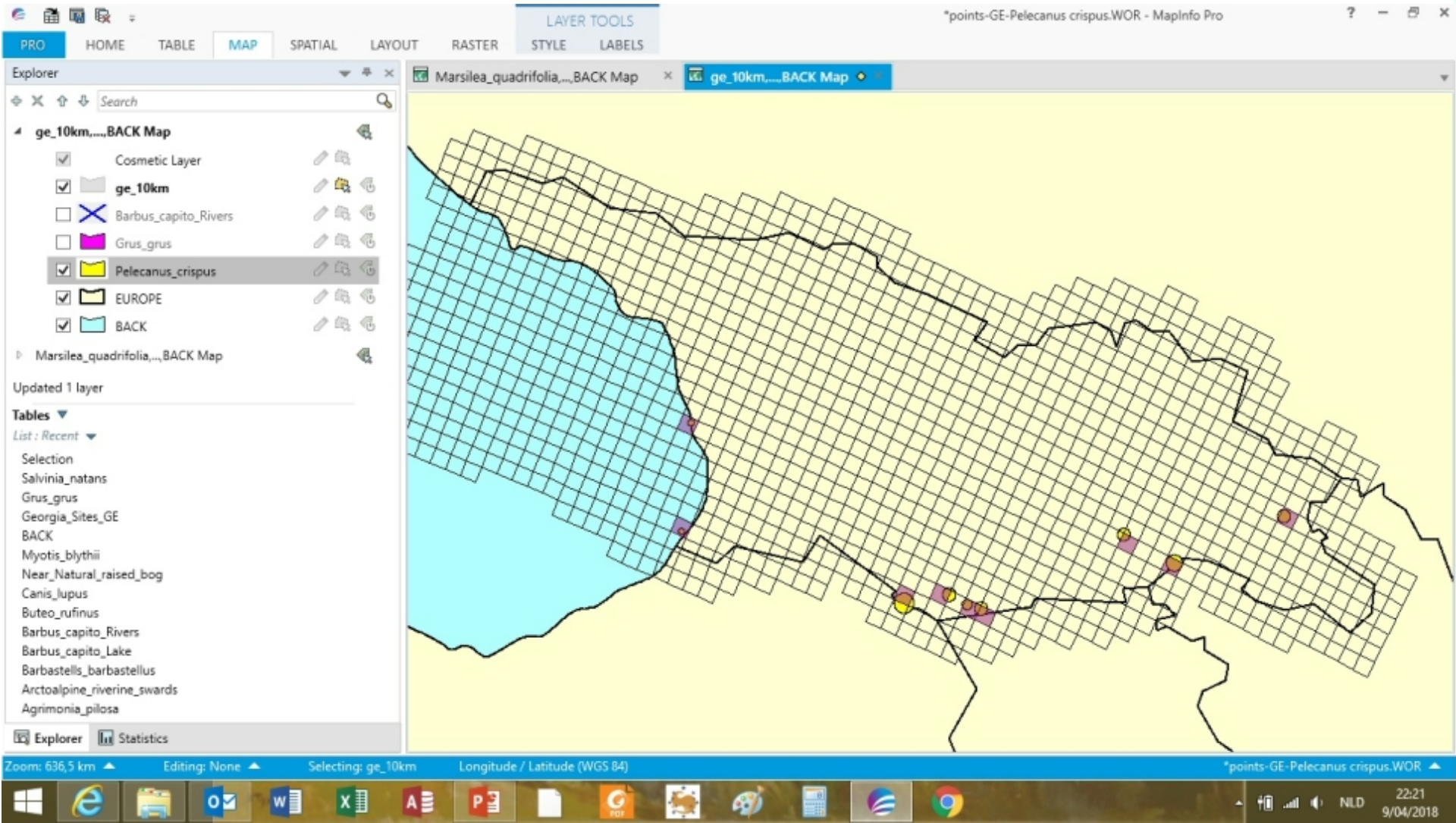
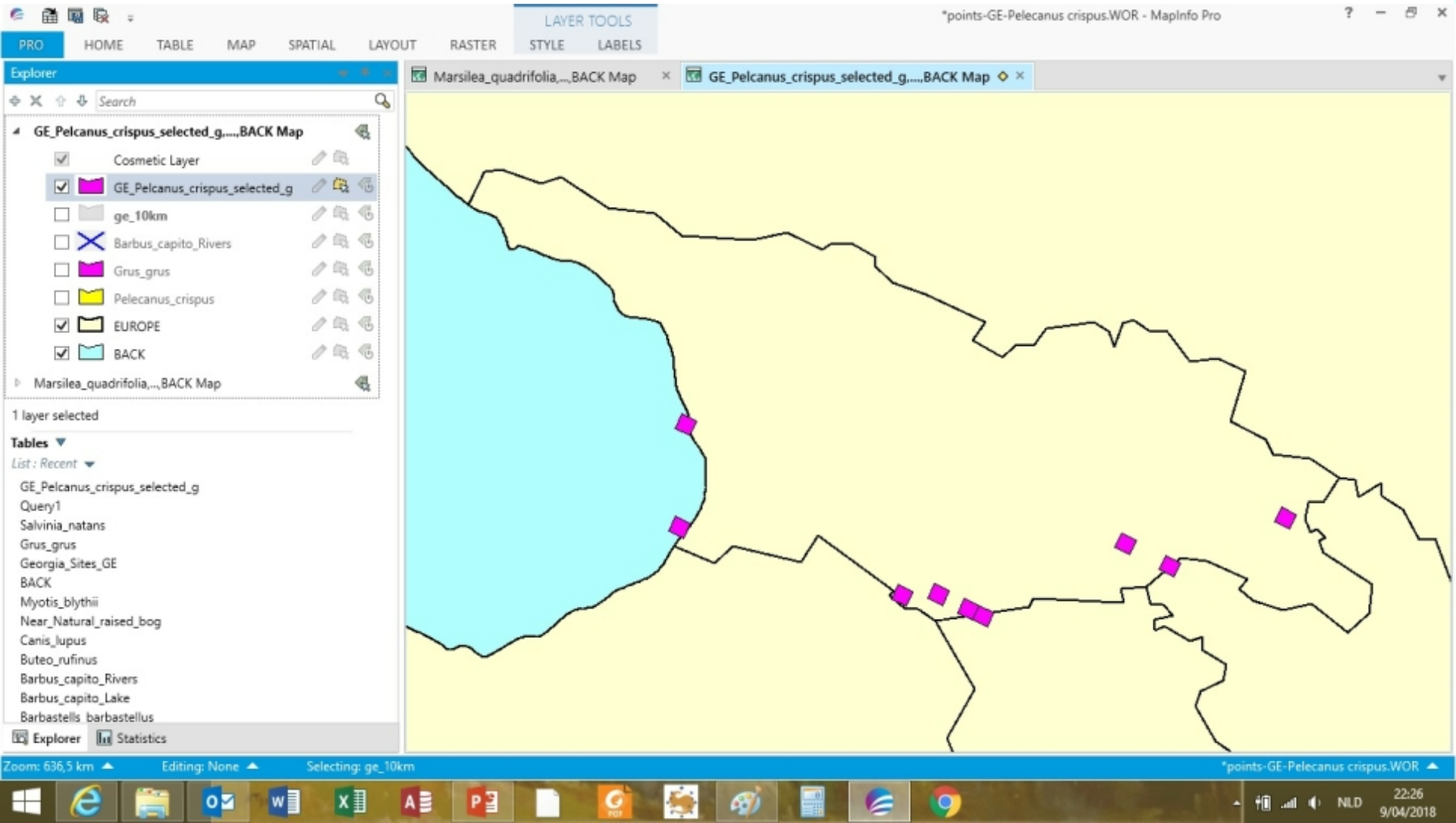


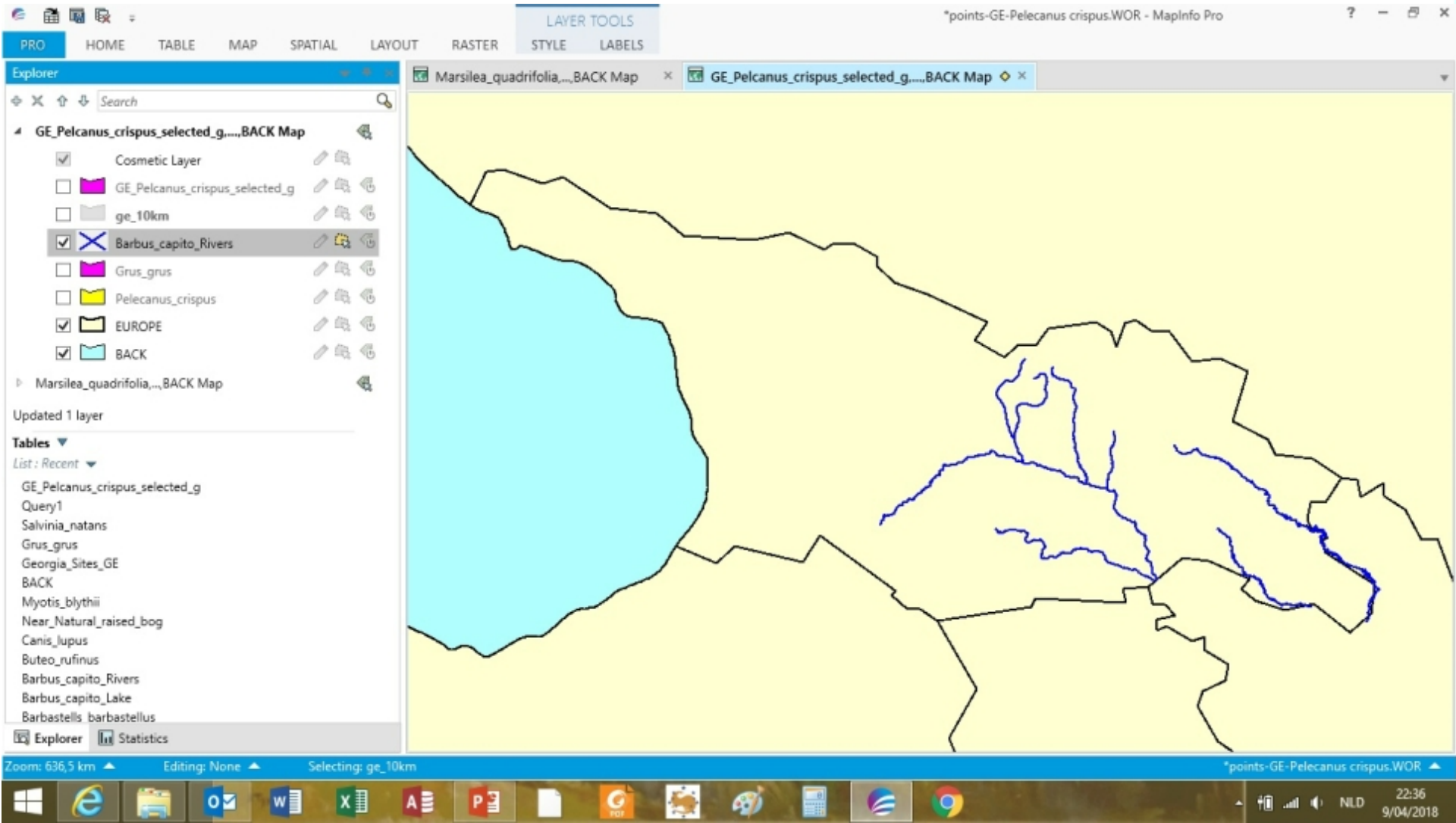
Pelecanus crispus Georgia



Lines: river sections, transects etc ..

- Lines can be considered as a rather detailed inventory
- All grid cells touching the line are taken into account, even for small coverages ?
- Or should we take a minimum length of the line covering the grid cell ?

Barbus capito Georgia



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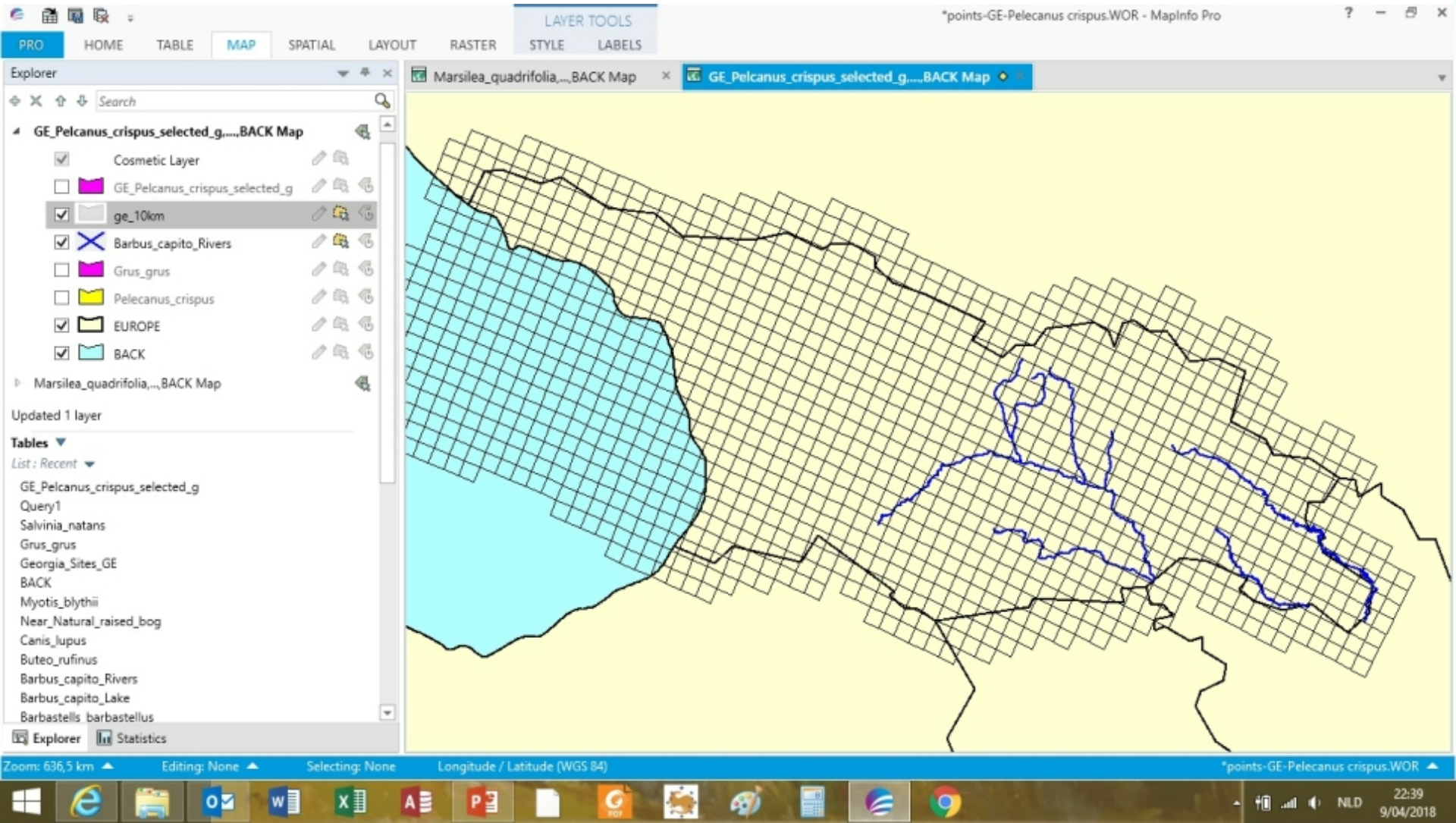

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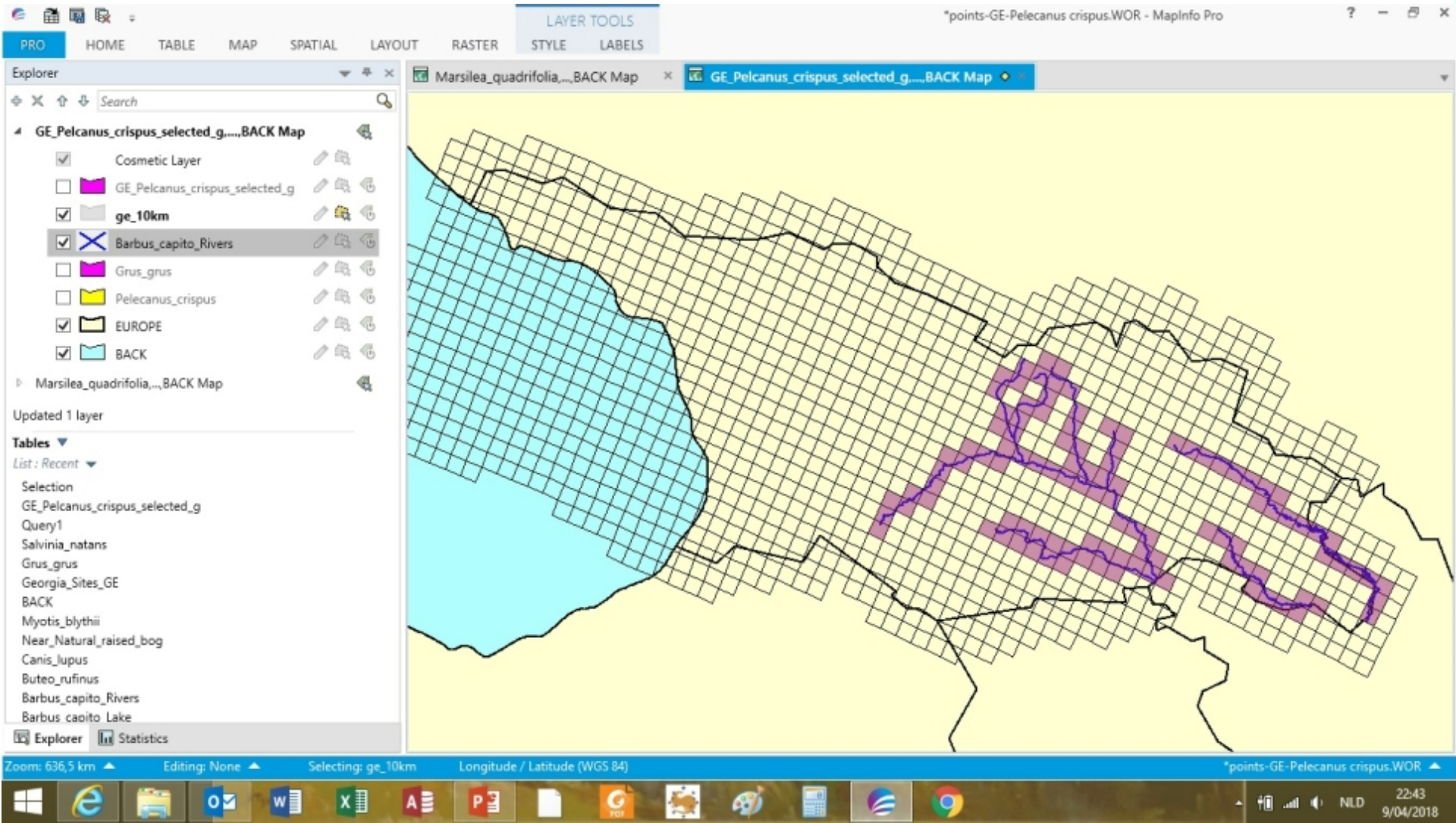

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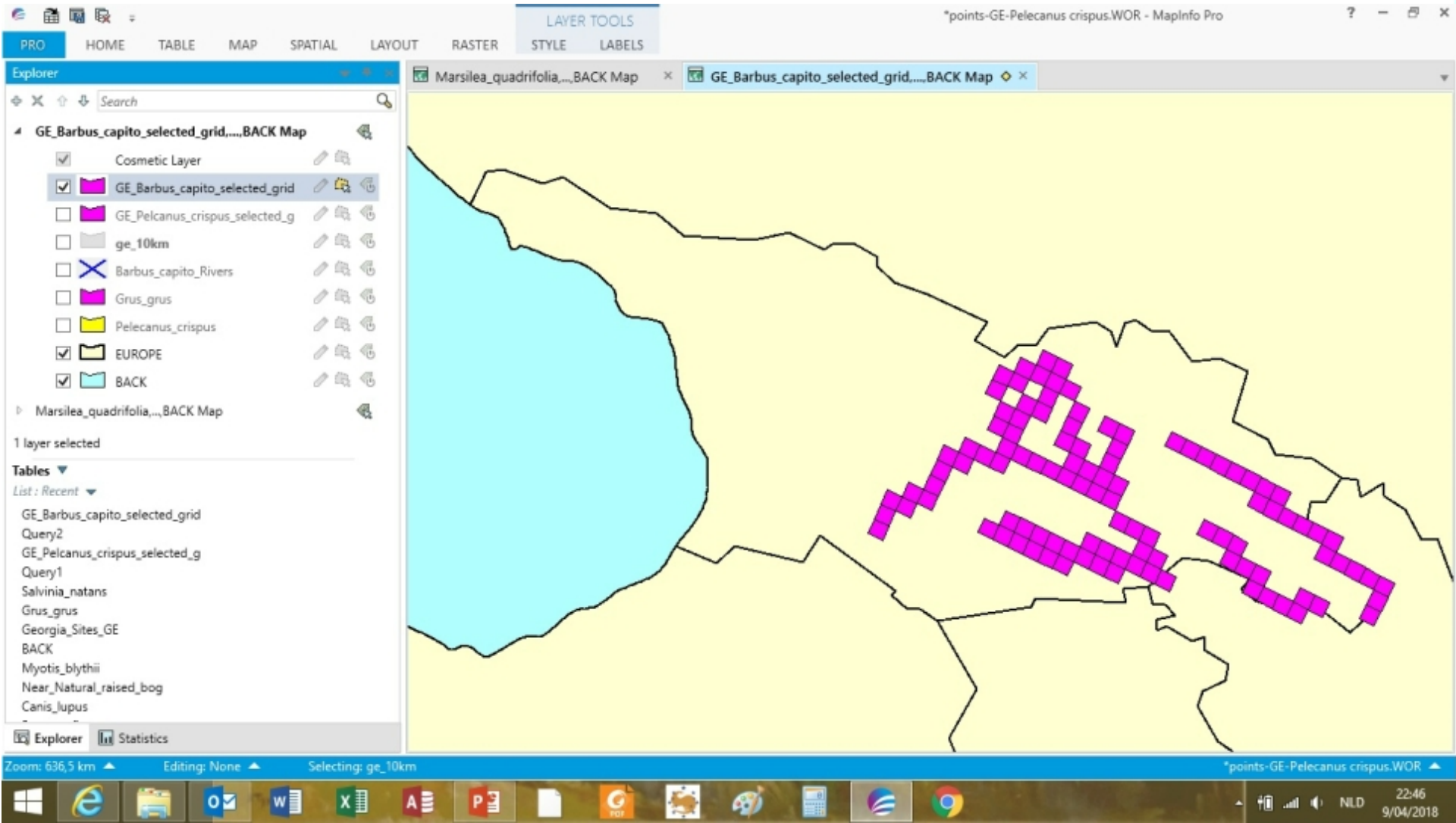

Polygons

- All grid cells touching the polygon are taken into account with the exception of a certain minimum percentage. (to be defined: 30 % ?)
- Or should there be a variable percentage in function of the distribution pattern of the feature ?
- Or should all grid cells touching the original polygon be taken in to account ?

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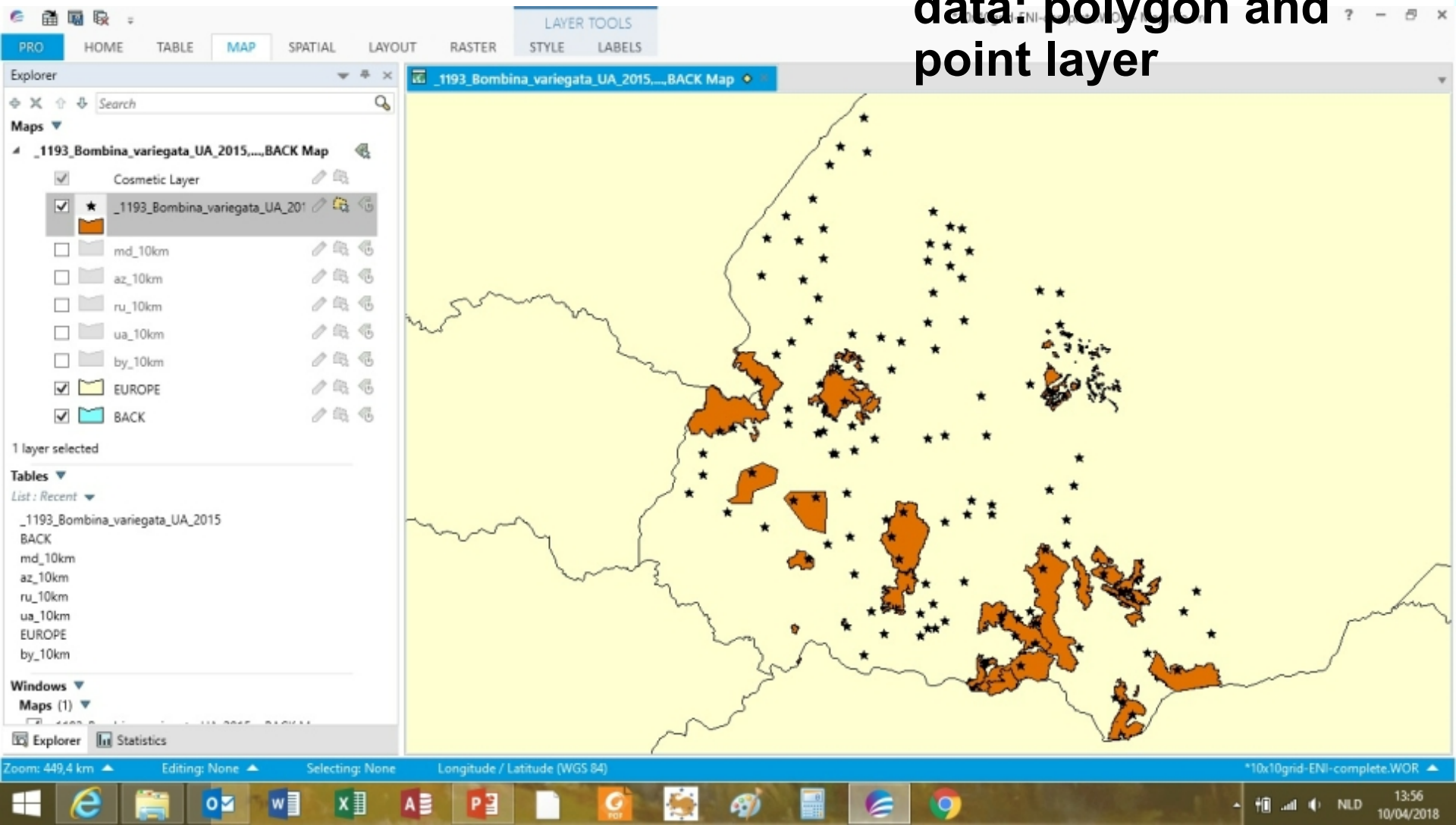
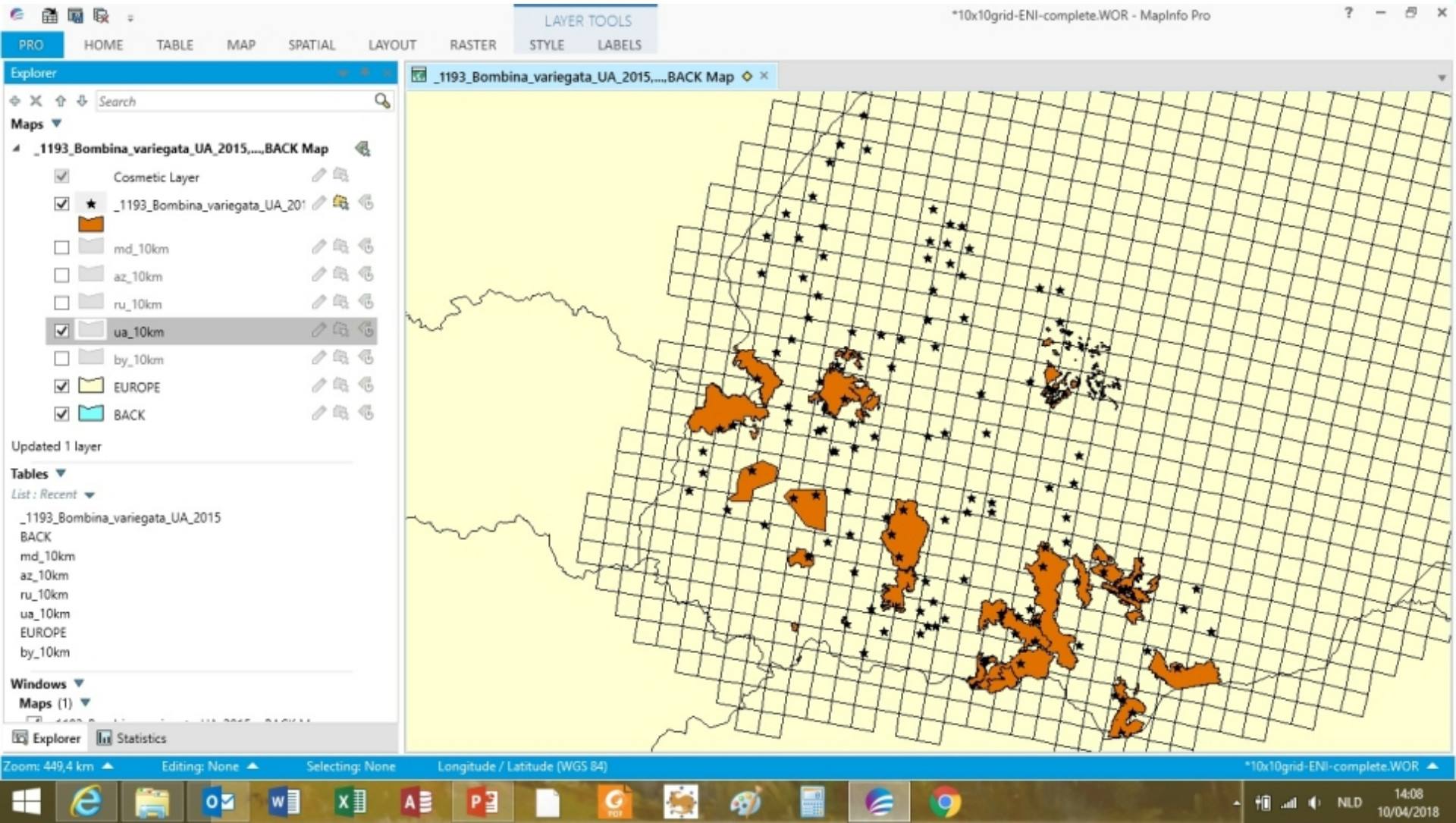
Bombina variegata Ukraine

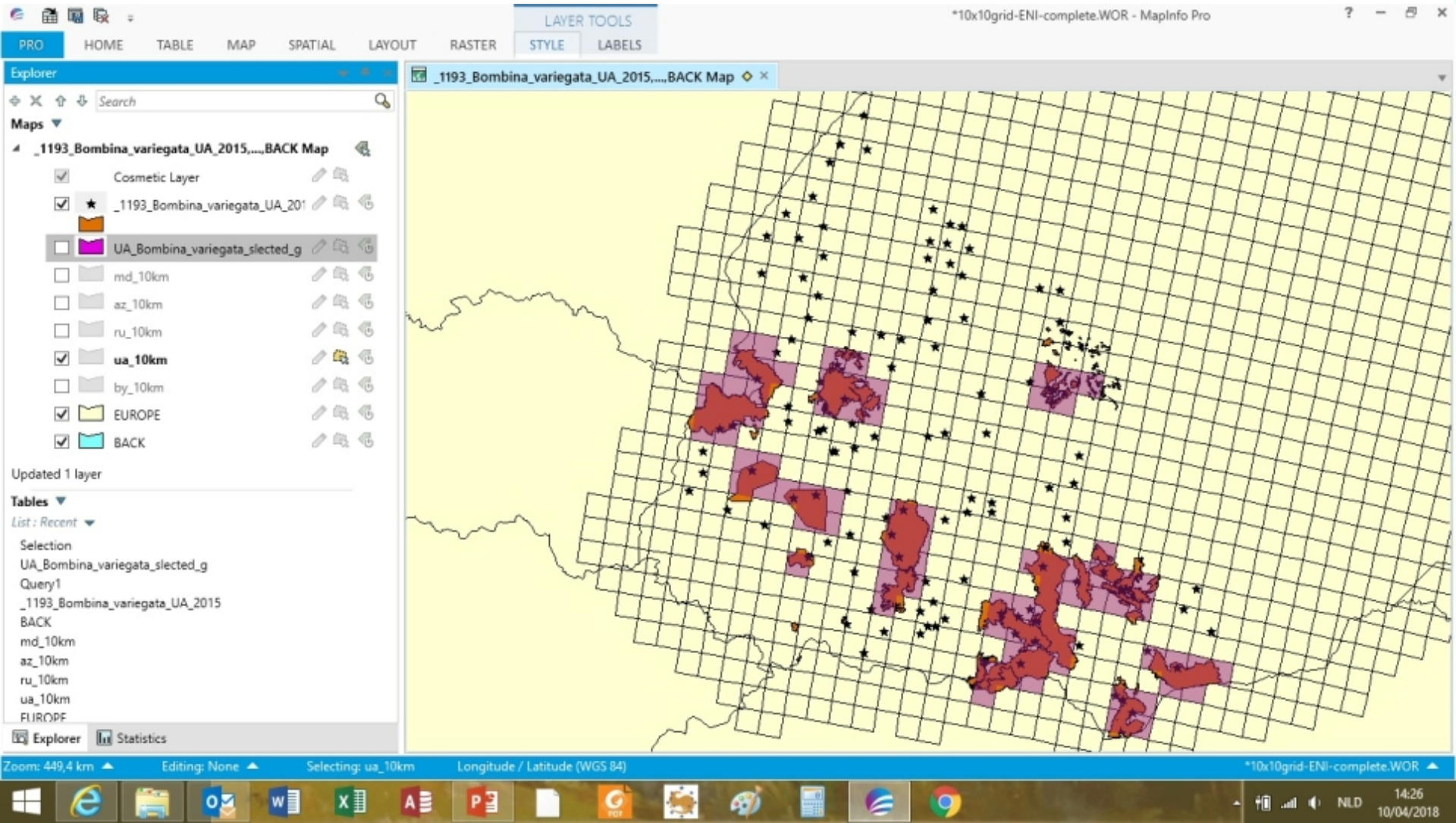
Original distribution data: polygon and point layer



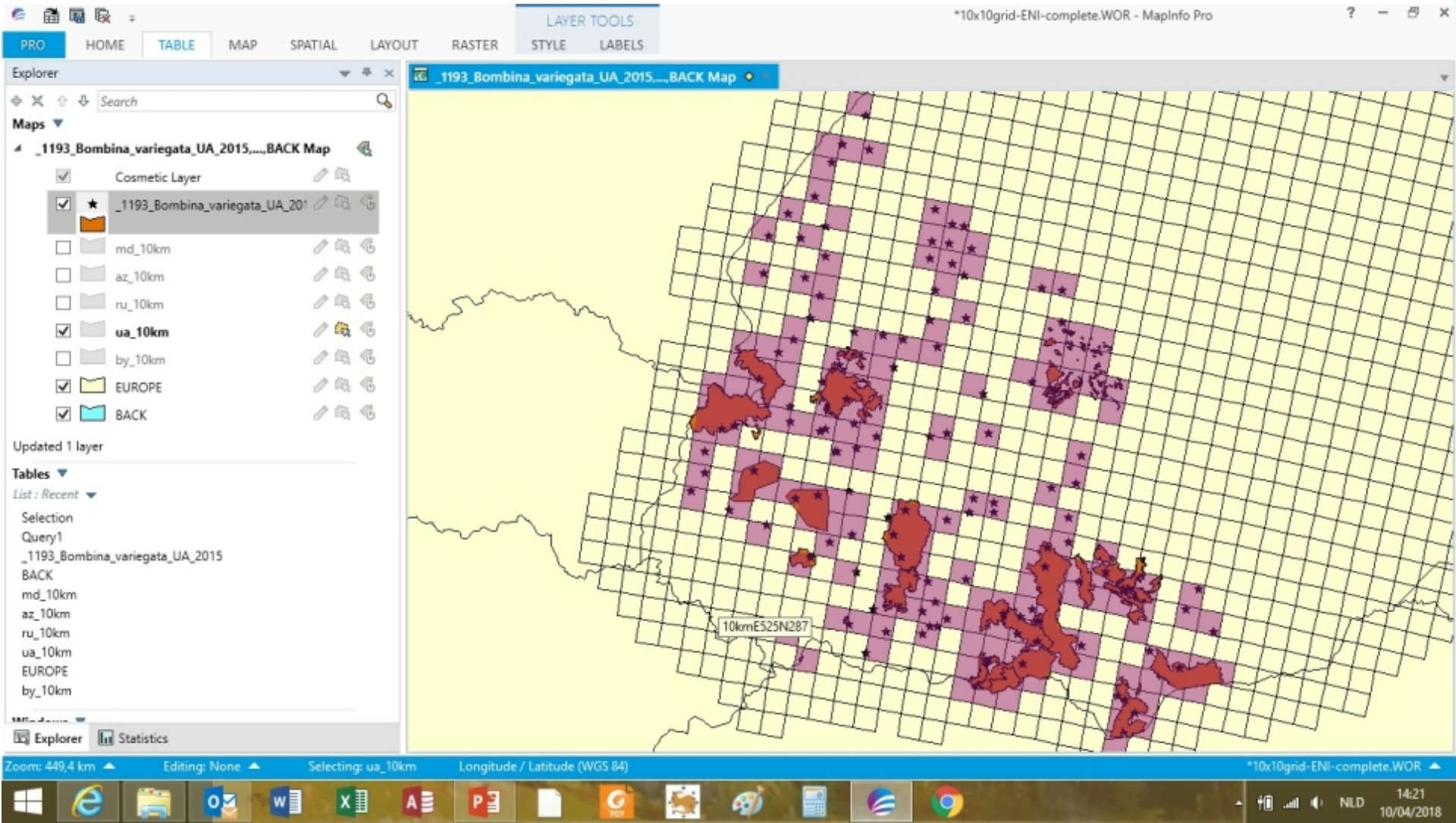
Bombina variegata Ukraine



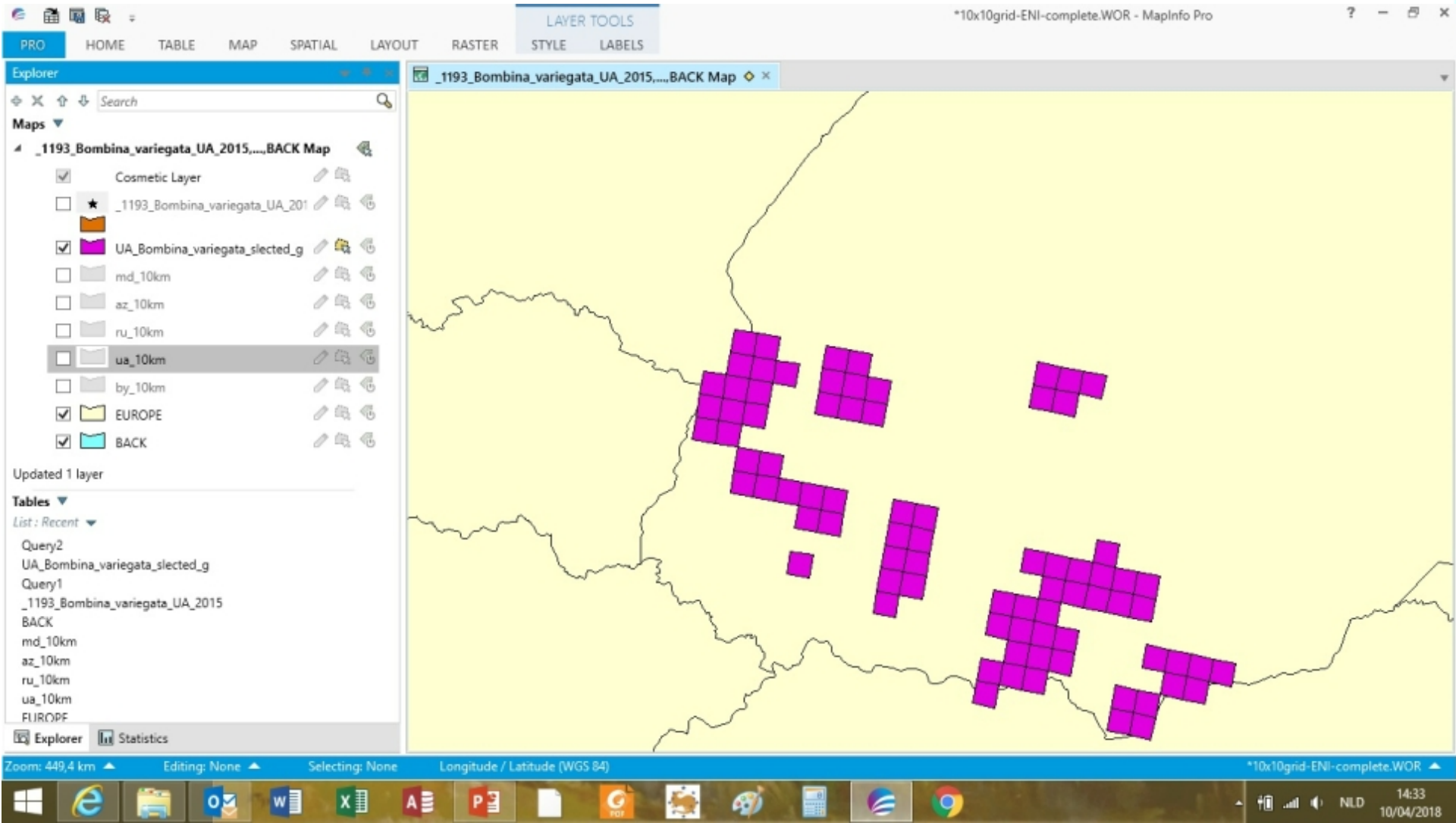
Bombina variegata Ukraine: working with polygon layer



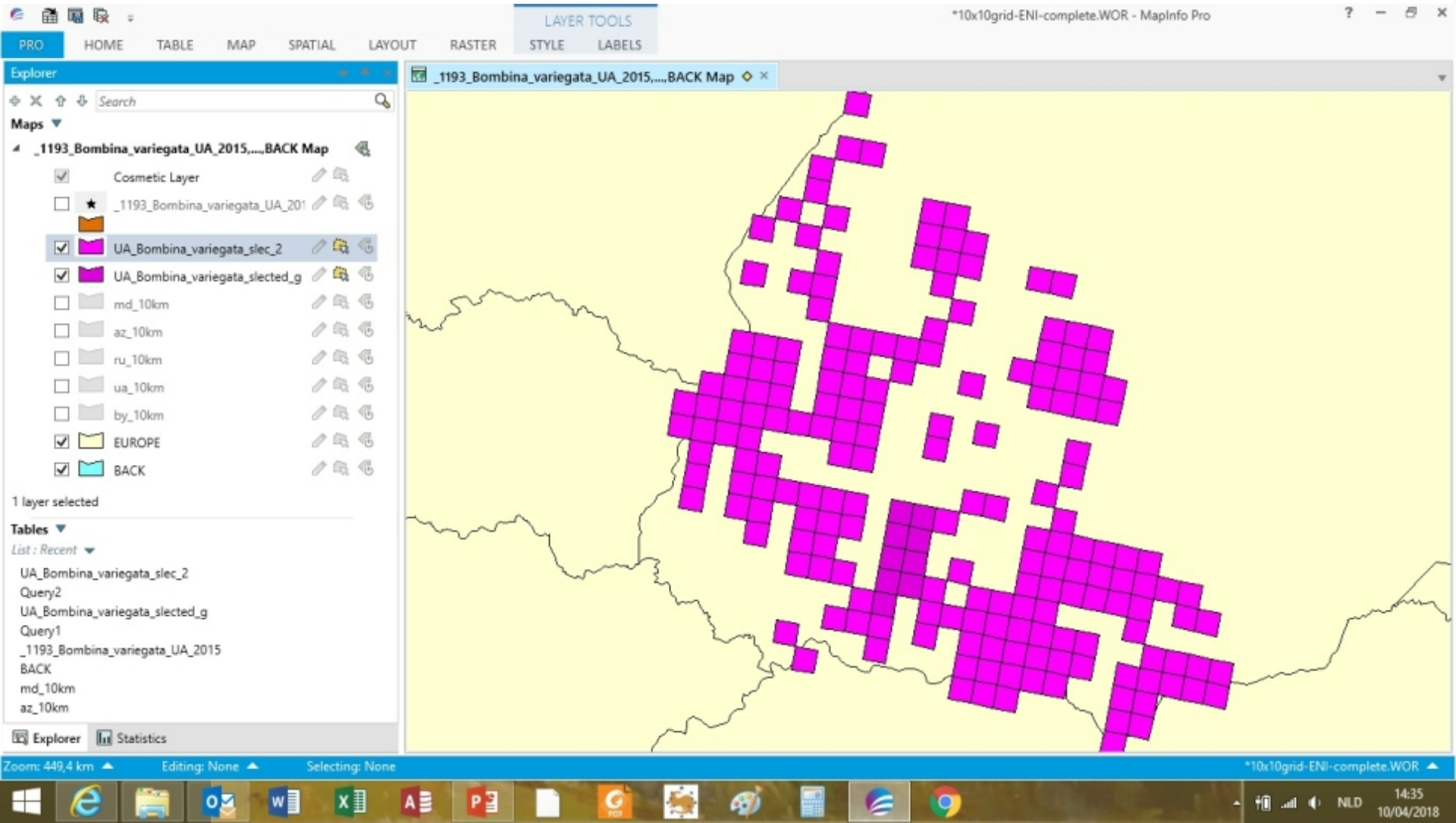
Bombina variegata Ukraine: working with polygon and point layer



Bombina variegata Ukraine: result from polygon layer



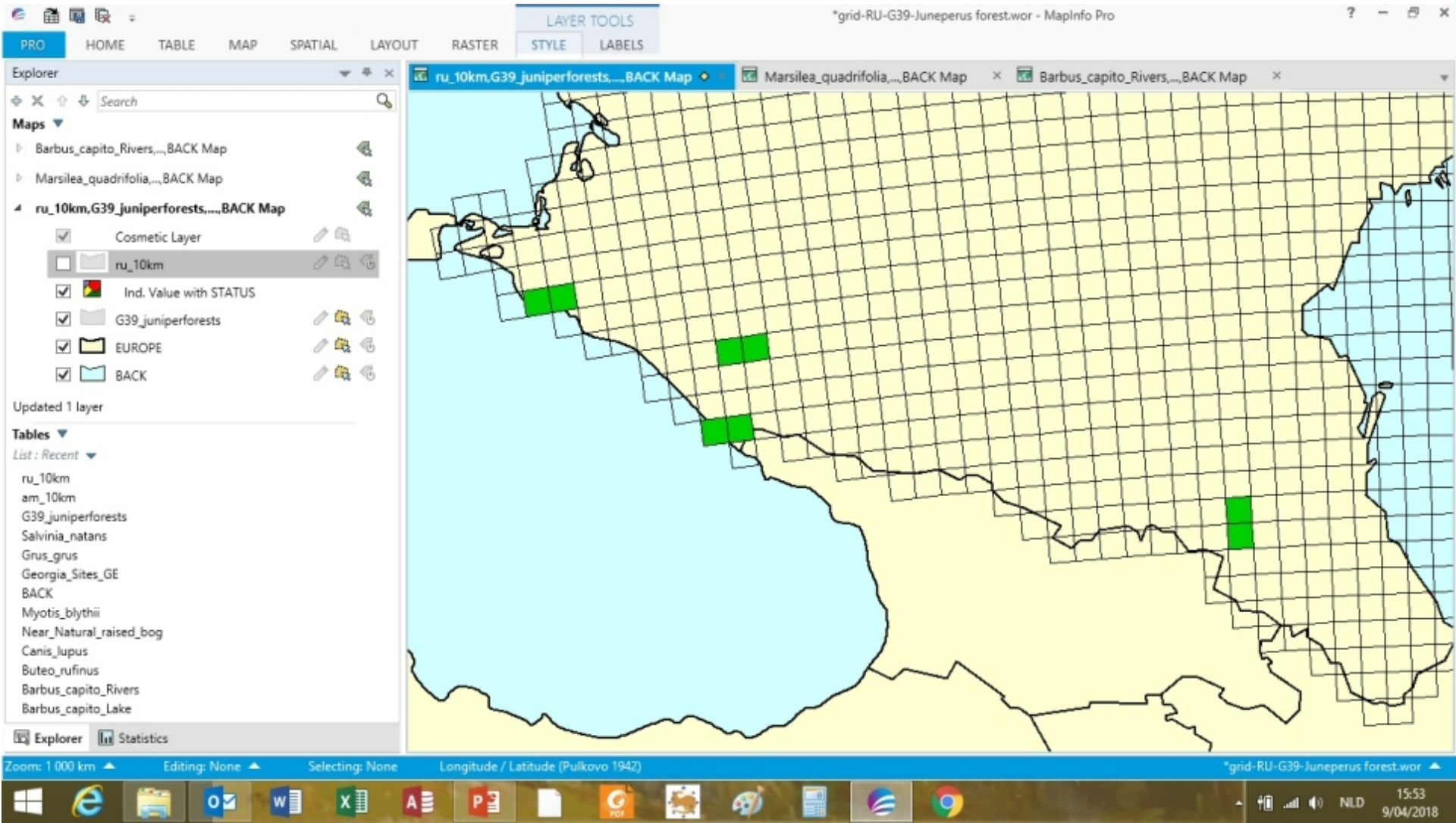
Bombina variegata Ukraine: result polygon and point layer



Gridded data
Source grid > 10x10km

- All grid cells covered by the larger original grid cells are marked. (minimum coverage percentage to be defined)
- The total area covered by the resulting grid cells will quite likely be larger than the original

Habitat G3.9 Juniperus forests 25x25km grid



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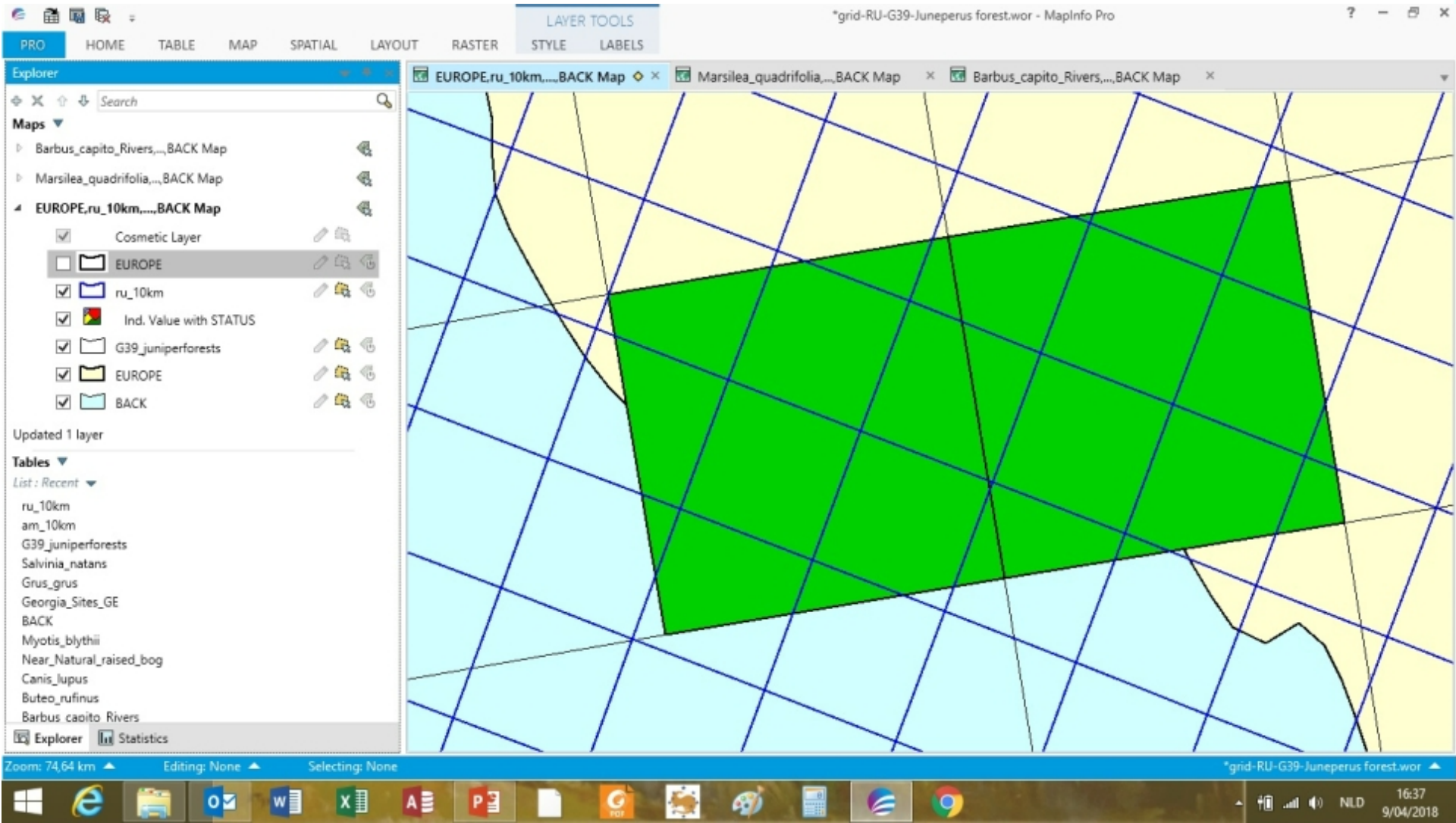

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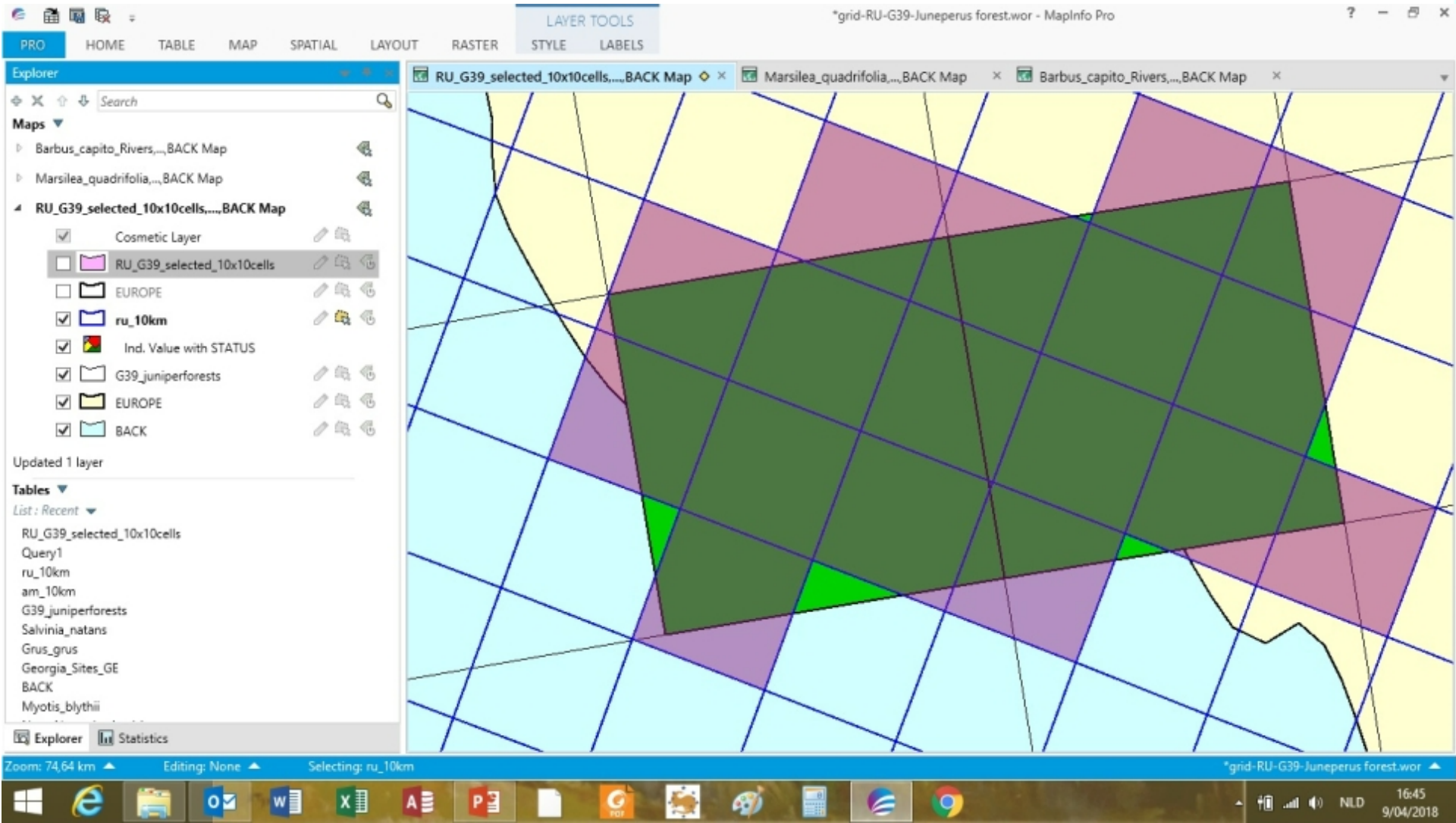
Habitat G3.9 Juniperus forests 25x25km grid



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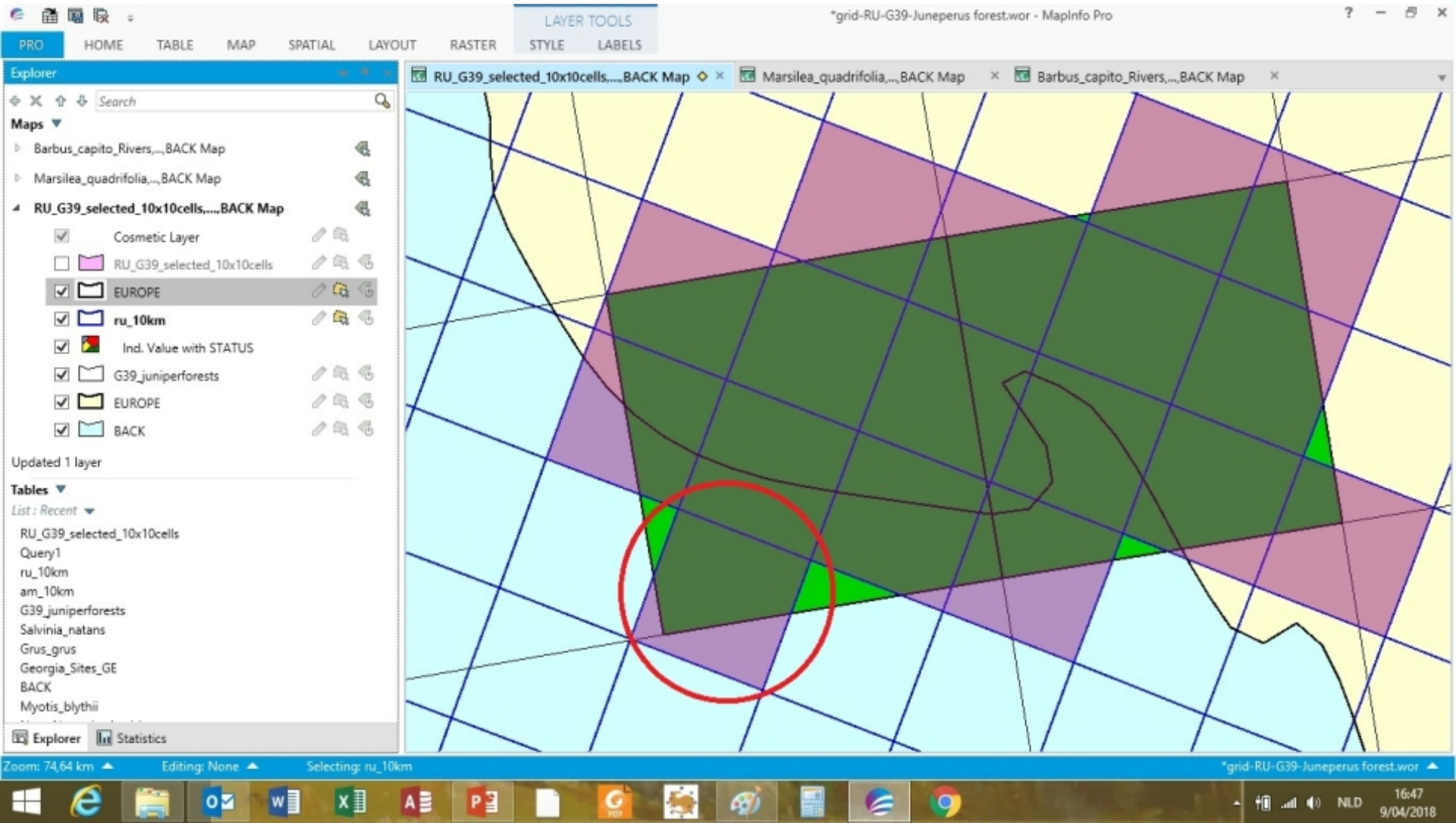

Gridded data
Source grid < 10x10km

- All grid cells covered by the smaller grid cells is marked. (the minimum percentage from the covering grid cell should be defined)
- The total area covered by the resulting grid cells will quite likely be smaller than the original

Conclusions

- One single set of rules for all countries and features is not possible
- 100% automated procedure is not possible
- Need for “cosmetic” cleaning: e.g.
  - ✓ Taking into account the “left-over polygons” larger than 30 % of the size of a grid cell, but split over 2 or more grid cells
  - ✓ Removal of accidentaly selected marine grid cells for terrestrial features
  - ✓ Or even manual clean-up, but this is time consuming
  - ✓ ....