

# Where to find magic mushrooms in Europe



MAP  
DOCUMENTATION



**Possessing, growing and consuming magic mushrooms is currently prohibited by law in many countries.**

**This material and map it describes does not promote the use of any legal or illegal substances. They are made for educational and harm reduction purposes only.**

# **Where to find magic mushrooms in Europe**

## **Map documentation**

**Bc. Josef Jehlička**  
[jehlijos.github.io/josef-jehlicka/](https://jehlijos.github.io/josef-jehlicka/)  
[jehlijos@proton.me](mailto:jehlijos@proton.me)

# Contents

<b>1</b>	<b>Spatial Data Sources</b>	<b>2</b>
<b>2</b>	<b>The procedure of analysis</b>	<b>2</b>
<b>3</b>	<b>Information sources</b>	<b>4</b>
<b>4</b>	<b>Used software</b>	<b>8</b>
<b>5</b>	<b>Image Sources</b>	<b>8</b>

# 1 Spatial Data Sources

Vector Europe polygon layer -

Natural Earth - Medium scale data, 1:50m

Mean temperature raster (October, 2023) -

Copernicus Interactive Climate Atlas

Soil bulk density raster -

SoilGrids250m 2.0 - Bulk density aggregated 5000m

Soil pH raster -

SoilGrids250m 2.0 - Soil pH in H<sub>2</sub>O aggregated 5000m

Soil organic carbon point measurements -

WoSIS latest - Organic carbon

Land cover raster -

CORINE Land Cover 2018 raster 100m

# 2 The procedure of analysis

Firstly new raster had to be interpolated from the points of measured organic carbon. It was created using the IDW method with an output cell size of 5000m to match the other soil data rasters.

Rasters then had to be reclassified to match the ideal conditions for mushrooms to grow. Land cover was reclassified into three qualitative categories.

- Best land cover - Pastures, Annual crops associated with permanent crops, Land principally occupied by agriculture, with significant areas of natural vegetation, Natural grassland
- Adequate land cover - Green urban areas, Vineyards, Fruit trees and berry plantations, Olive groves, Agro-forestry areas, Transitional woodland/shrub,
- Least suitable land cover - Non-irrigated arable land, Permanently irrigated arable land, Rice fields, Complex cultivation patterns, Moors and heathland, Sclerophyllous vegetation, Sparsely vegetated areas, Inland marshes, Peatbogs,

This classification was conducted taking into account both the type of vegetation and the extent of human intervention in the landscape. [1]

Interpolated raster with organic carbon was reclassified to show only places with 3% to 17%. The optimal range is 5-15% yet this interval was slightly increased.

pH raster was reclassified to show only suitable pH levels from 4.0 to 6.0. [7]

Bulk density was reclassified into two qualitative categories. Optimal range is 0.8 - 1.0 g/cm<sup>3</sup> and outside this interval soil suitability exponentially worsens. [9] So ranges 0.6 - 0.8 g/cm<sup>3</sup> and 1.0 - 1.2 g/cm<sup>3</sup> are also included but with half of the original weight value.

The temperature raster was classified in intervals of 1°C. Where interval 11.5-12.5°C was chosen as optimal and weight values were decreased with each following interval. The minimal suitable temperature is 8.5°C and maximal is 16.5°C. [10]

A new raster of soil evaluation was created which combined previously described soil rasters. They are combined with their values weighted by importance of the phenomenon [8] they show:

- Land cover - 40%
- Bulk density - 25%
- Organic Carbon - 20%
- pH - 15%

Cells without suitable land cover are not taken into computation.

This raster was combined with a temperature raster in bivariate colours. The final raster was clipped by the Europe country's polygons.

### 3 Information sources

**Psilocybe semilanceata** - commonly known as the liberty cap, is both one of the most widely distributed psilocybin mushrooms in nature, and one of the most potent. In wet conditions the colour will be yellowish-brown. It has a glutinous layer which can be removed. When dried out the colour fades. The conical cap remains a similar shape throughout these changes. It has striated markings with a distinctive small nipple at the top. The thin stem can grow up to 8cm. The gills are creamy-grey at first, but as the mushroom matures they become a purple-brown.

Source: [1]

#### **How to feel fine after consumption:**

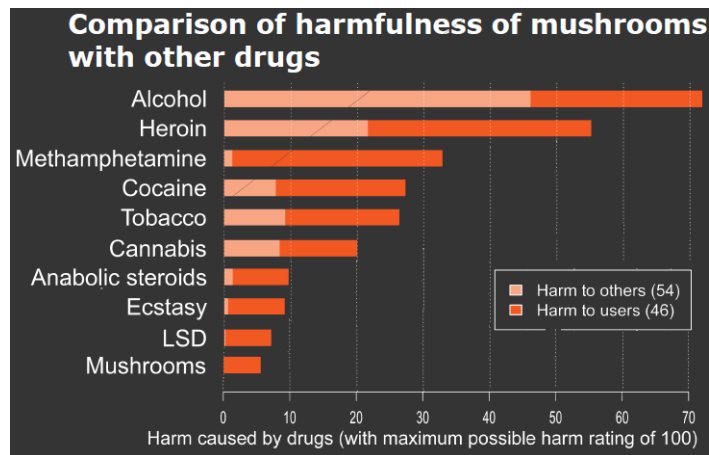
- Start with lower dosage (like 2 grams)
- Do not use if you are in a bad mood
- Use in a familiar safe space
- Have a trip-sitter with you (trusted non-using informed friend)
- Do not combine with other drugs !

Sources: [2] [3]

#### **Possible effects on your body:**

- Nausea
- Higher body heat
- Colours seem brighter
- Short-term memory anomalies
- Objects seem moving/breathing
- Seeing visual patterns with closed eyes
- Confusion and time distortion

Sources: [2] [3]




Sources: [4]

**DID YOU KNOW ?**

That psilocybin, the hallucinogen contained in the magic mushrooms, is experimentally used by psychoanalysts to treat patients with depression or alcohol addiction.


Only one therapeutic session under influence of psilocybin can improve patients mood for several months.

Sources: [5] [6]



**Ideal temperature**  
This map uses mean temperature in October of 2023. This month seems to be ideal for the growth.

- *Optimal temperature*- 10°C - 14°C
- *Adequate temperature*- 8.5°C - 17°C



**Ideal soil**  
Following factors effect the growth the most in descending order :

- *Bulk density* -  
optimal - 0.8 - 1.0 g/cm<sup>3</sup>  
adequate - 0.6 - 1.2 g/cm<sup>3</sup>
- *Organic carbon* -  
optimal - 5 - 15 %
- *pH* -  
optimal - 4.0 - 6.0
- Liberty caps grow in humid meadows, pastures and old abandoned fields

Sources: [7] [8] [9] [10] [11]

- Legal status of psilocybin mushrooms [12]

[1] Knarkkorven (2015),*Nordic Liberty Cap Hunter's Field Guide*.

[2] Adam, Psychedsubstance. "Magic Mushrooms Safety-Guide (Psilocybin)" YouTube, Uploaded by Psychedsubstance, 25. 8. 2015, <https://www.youtube.com/watch?v=K6QseKGAVYk>.

[3] DR. NEWCOMBE, Russel a THOMPSON, Louise, LINNELL, Michael (ed.). *Magic Mushrooms*. 1. U.K.: Lifeline Publications, 2004. ISBN 095200823-8.

[4] Nutt, D.J., King, L.A., Phillips, L.D. (November 2010). "*Drug harms in the UK: a multicriteria decision analysis*". *Lancet*, 376(9752), 1558–1565. London, England. doi:10.1016/S0140-6736(10)61462-6. PMID: 21036393.

[5] Johnson, M.W., Griffiths, R.R. *Potential Therapeutic Effects of Psilocybin*. *Neurotherapeutics* 14, 734–740 (2017). <https://doi.org/10.1007/s13311-017-0542-y>



[6] ERRITZOE, David; ROSEMAN, L.; NOUR, M. M.; MACLEAN, K.; KAELEN, M. et al. *Effects of psilocybin therapy on personality structure*. Acta Psychiatrica Scandinavica. 2024, roč. 149, č. 5, s. 368-378. ISSN 1600-0447.

[7] Gartz, J., Appelius, C., Taake, C., Falk, B. (1996). *Magic Mushrooms Around the World: A Scientific Journey Across Cultures and Time : the Case for Challenging Research and Value Systems* . LIS Publications.

[8] Guzman, G. (1983). *The Genus Psilocybe: A Systematic Revision of the Known Species Including the History, Distribution and Chemistry of the Hallucinogenic Species* . J. Cramer.

[9] Li, C. H., Ma, B. L., Zhang, T. Q. (2002). *Soil bulk density effects on soil microbial populations and enzyme activities during the growth of maize (Zea mays L.) planted in large pots under field exposure* . Canadian journal of soil science, 82(2), 147-154.

[10] Boddy, L., Büntgen, U., Egli, S., Gange, A. C., Heegaard, E., Kirk, P. M., ... Kauserud, H. (2014). *Climate variation effects on fungal fruiting*. Fungal Ecology , 10, 20-33.

[11] Keay, S. M., Brown, A. E. (1990). *Colonization by Psilocybe semi-lanceata of roots of grassland flora* . Mycological Research, 94(1), 49-56.

[12] Legal status of psilocybin mushrooms. Online. In: Wikipedia: the free encyclopedia. San Francisco (CA): Wikimedia Foundation, 2001-. Dostupné z: [https://en.wikipedia.org/wiki/Legal\\_status\\_of\\_psilocybin\\_mushrooms](https://en.wikipedia.org/wiki/Legal_status_of_psilocybin_mushrooms). [cit. 2024-04-06].

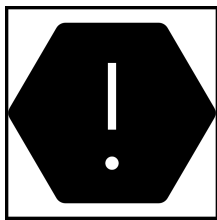
## 4 Used software

- ArcGIS
- Adobe Illustrator
- Adobe Photoshop

## 5 Image Sources



<https://www.foraging.co.uk/>



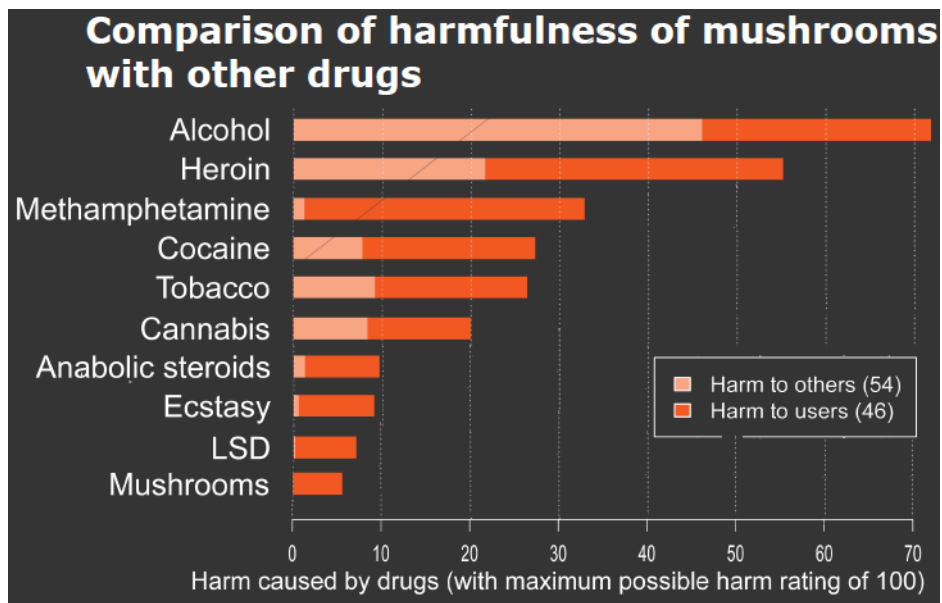
Warning Hex Filled SVG Vector, [svgrepo.com](https://www.svgrepo.com/), Carbon Design



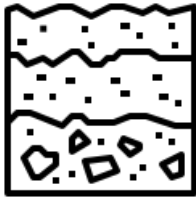
Melting smiley face by Ella Mitchell



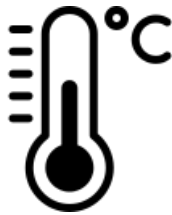
Hallucination icon created by Freepik - Flaticon



Nutt, D.J., King, L.A., Phillips, L.D. (November 2010). "Drug harms in the UK: a multicriteria decision analysis". *Lancet*, 376(9752), 1558–1565. London, England. doi:10.1016/S0140-6736(10)61462-6. PMID: 21036393.



Soil icon - [freepik.com](https://www.freepik.com) - Icon by ultimatearm



Thermometer icon - created by Freepik - Flaticon

CREATED BY VECTORPORTAL.COM  
ORIGINAL FREE VECTORS SINCE 2005



CREATED BY VECTORPORTAL.COM

Stock Journalist Hunter Thompson Vector And Icon - [vectorportal.com](https://www.vectorportal.com)



[first-nature.com](https://www.first-nature.com)



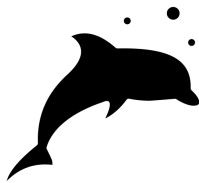
Sea horse icon by Icons8



Jellyfish icon by Icons8



Octopus icon by Icons8



Dolphin icon - freepik.com - Icon by - Ida Desi Mariana



Whale Icon - freepik.com - Icon by G-CAT