

**INSIGNIA** 



# Honey bee colonies as biomonitors of the environment

#### The INSIGNIA Consortium

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A "guideline for Apicultural citizen science to use the honey bee colony for bio-monitoring of the environment "

The guideline is available on the following websites

- https://www.insignia-bee.eu/
- **EU Pollinator Information Hive**
- **EU Food Safety Protection of bees**

INSIGNIA study 2018-2021

# From sampling to analysis





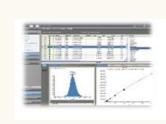






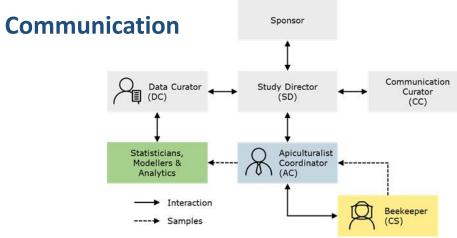


### Pesticide residue and ITS2 metabarcoding, analyses





# Communication, organisation, output



Instruction using picture manual, (virtual) meetings, social media and email



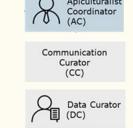




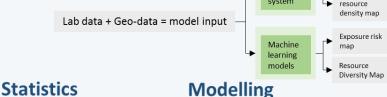
### **Quality-controlled sequence from** sampling to analysis using protocol

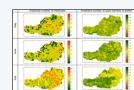






# **Statistics and modelling**





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