



# Preclinic indicators at the apiary level to prevent honeybee diseases



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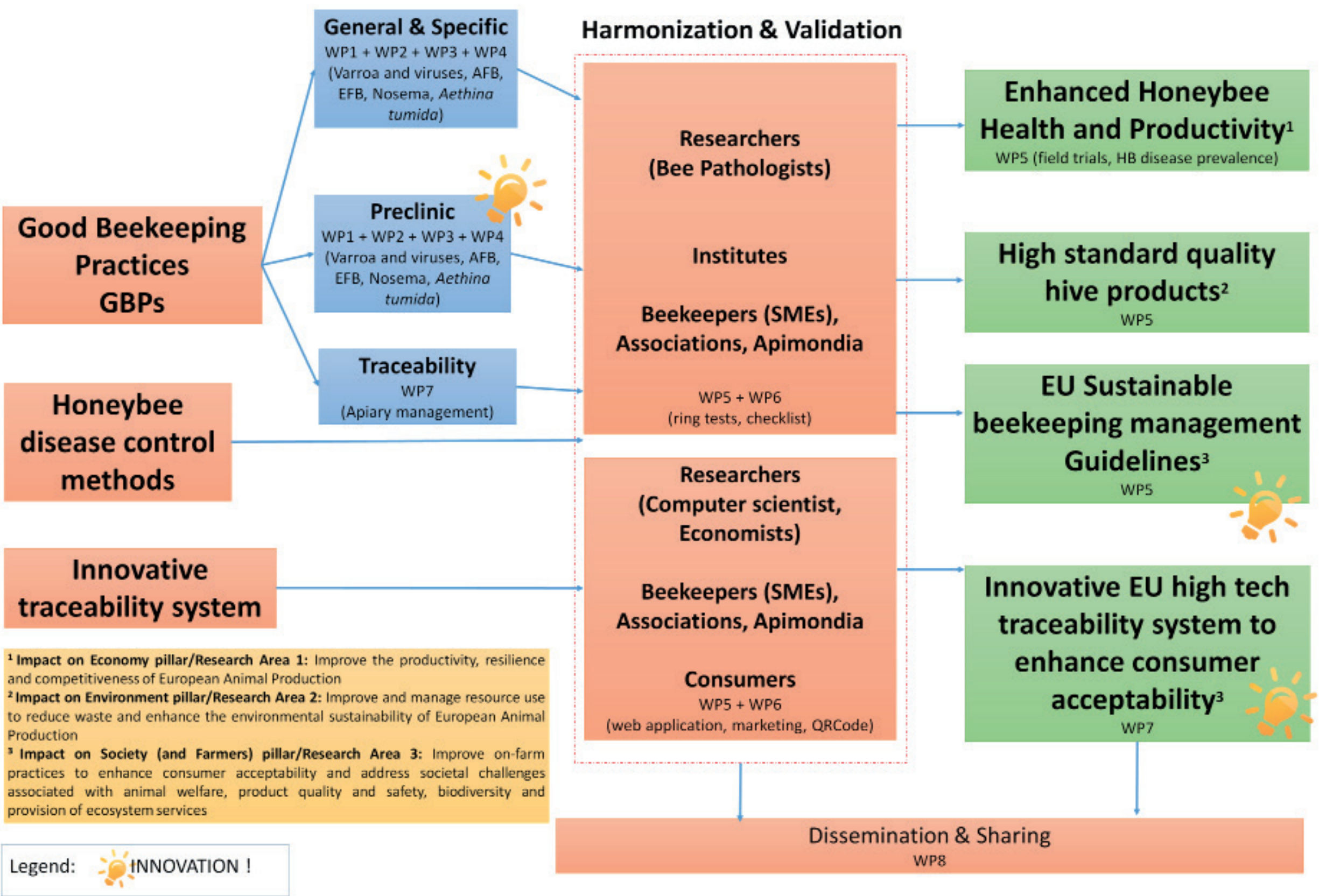
Preclinic indicators, as essential part of the Good Beekeeping Practices (GBP), allow to diagnose bee diseases before symptoms appear. Therefore, chemical treatments can be reduced in order to avoid the risk of residues in the honeybee products. **BPRACTICES** is a project funded from the European Union's Horizon 2020 research and innovation programme under Grant Agreement n° 696231, ERA-Net SusAn – European Research Area on Sustainable Animal Production Systems, that aims to **develop a sustainable beekeeping breeding system by implementing innovative management practices (Good Beekeeping Practices - GBPs).**

The project consortium, coordinated by the Istituto Zooprofilattico Sperimentale del Lazio e della Toscana "M. Aleandri" (Italy), includes: University of Namik Kemal (Turkey), Agriculture Institute of Slovenia (Slovenia), Centro de Investigación Apícola y Agroambiental de Marchamalo (Spain), Austrian Agency for Health and Food Safety (Austria), Mississippi State University (USA) and Istituto Zooprofilattico Sperimentale delle Venezie (Italy). Moreover the project involves: the International Federation of Beekeepers Association (Apimondia), the University of Genova (Italy), and has the valuable collaboration of the European Union Reference Laboratory for Bee Health (ANSES, France) and of the Food and Agriculture Organization of the United Nations (FAO) Technologies and practices for small agricultural producers (TECA) platform, the European Professional Beekeepers Association (EPBA).

Eight work packages aim at the following specific accomplishments:

- **prevention and control** of the main honeybee diseases adopting proper good beekeeping practices (GBP) guaranteeing **quality and safety of hive products**;
- economic evaluation of competitiveness and resilience of European beekeeping;
- development of an innovative traceability system giving information on the product's origin that will benefit beekeepers and consumers;
- validation at the apiary level of all the innovations developed within the project
- dissemination of results by communication activities to ensure visibility and sharing of the project outcomes.

Diseases may be prevented by identifying **innovative laboratory diagnostic methods and matrices** from the hive (e.g. combs, comb swabs, bottom hive debris or powder sugar, etc). The use of new diagnostic methods such as biomechanical and biomolecular techniques will be developed as an early laboratory or field diagnosis (e.g. AFB or EFB preclinic diagnosis from powder sugar or SHB preclinic diagnosis from bottom hive debris by Real-time PCR).



**SCHEME OF THE BPRACTICES PROJECT**



Prevention practices through this new approach represents an opportunity to **ensure improving honeybee health and consequently increase the profitability of the beekeeping sector.**

Communication activities will be organized to ensure visibility and the sharing of project results with beekeepers, consumers, policy makers and the scientific community.

