

IPM Popillia

Integrated Pest Management of the Japanese Beetle

Overview of the Horizon2020 Project "Integrated Pest Management of the invasive Japanese beetle, *Popillia japonica*"

Giselher Grabenweger

Agroscope, Dept. Plant Protection, RG Ecological Plant Protection in Arable Crops

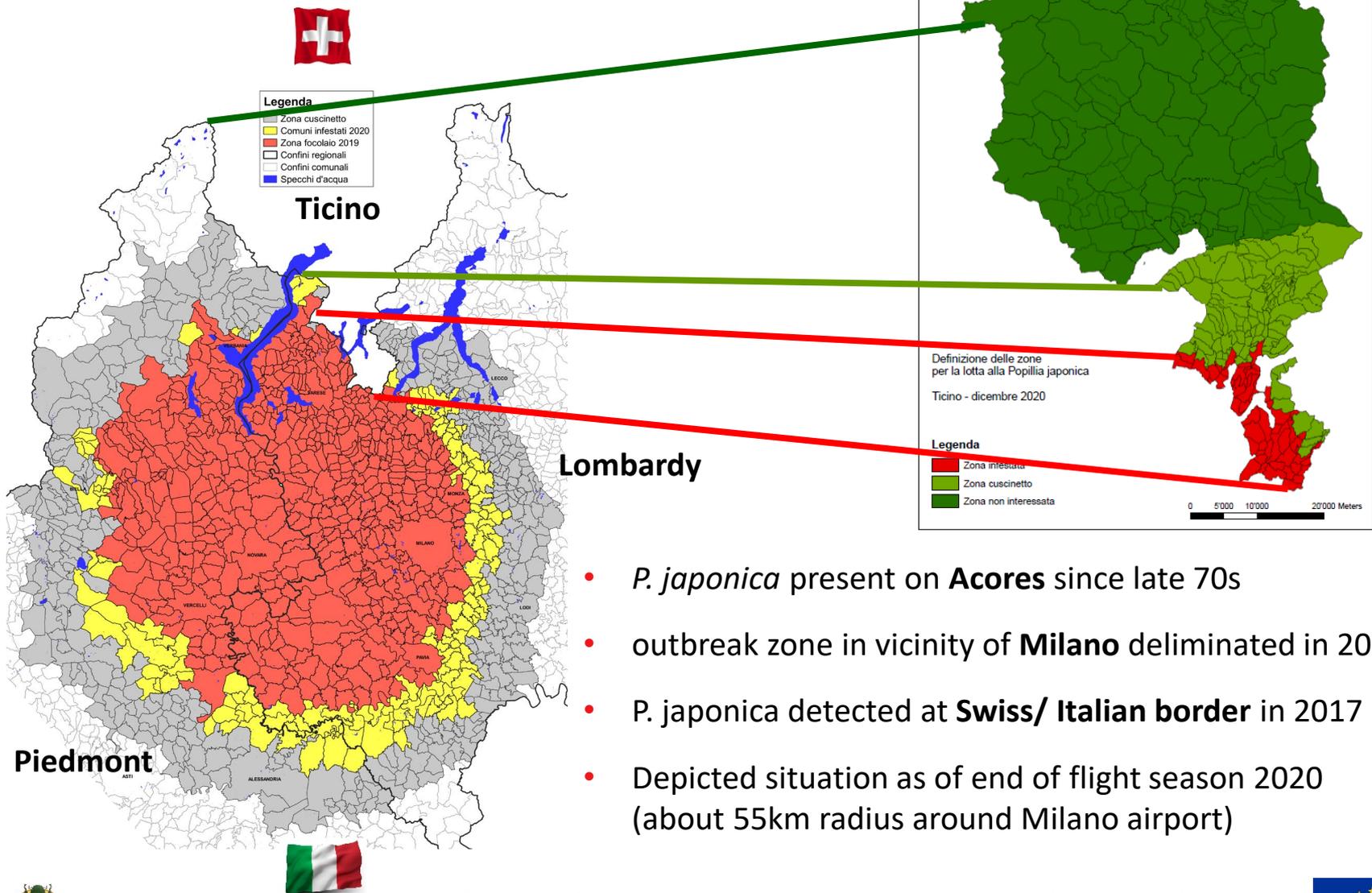
The star of IPM-Popillia ...



Photos: Tanja Sostizzo, Christian Schweizer, Agroscope



Japanese beetle in Europe ...



- *P. japonica* present on **Acores** since late 70s
- outbreak zone in vicinity of **Milano** delimited in 2014
- *P. japonica* detected at **Swiss/ Italian border** in 2017
- Depicted situation as of end of flight season 2020 (about 55km radius around Milano airport)



© Figures: Giovanni Bosio, phytosanitary service of the Piedmont region
Cristina Marazzi, phytosanitary service of the Ticino



IPM-Popillia 2 main objectives

- to help **confining the spread** of the invasive pest
- to **prevent the build-up of high population densities** that cause economic loss to agricultural crops and increase migration pressure

Swiss partners in the IPM-Popillia consortium



Research



Plant health services



SMEs



Farming sector



Advisory Board



Agroscope
(Coordinator)



Servizio fitosanitario
Ticino

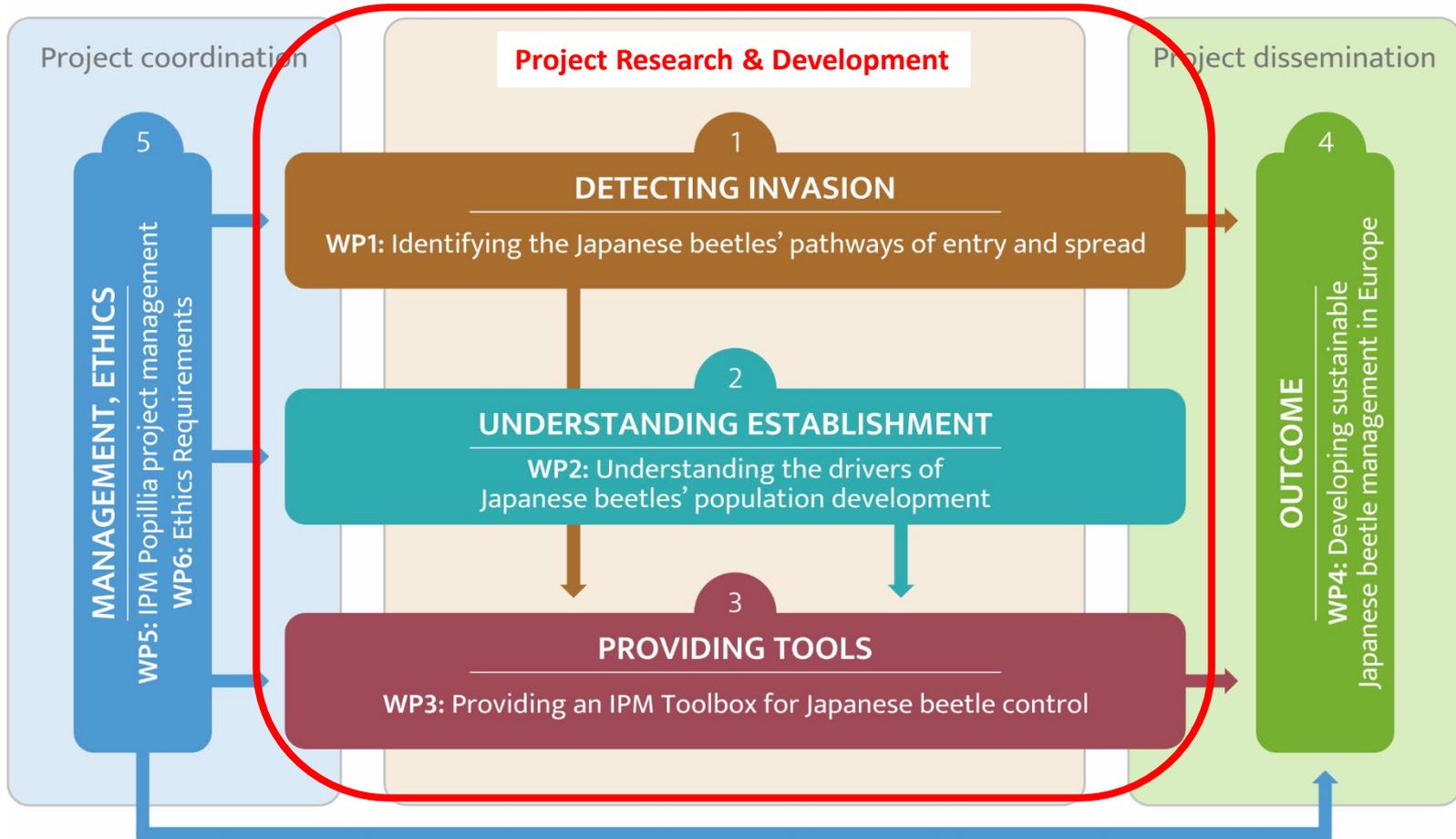


Jardin Suisse
Ticino



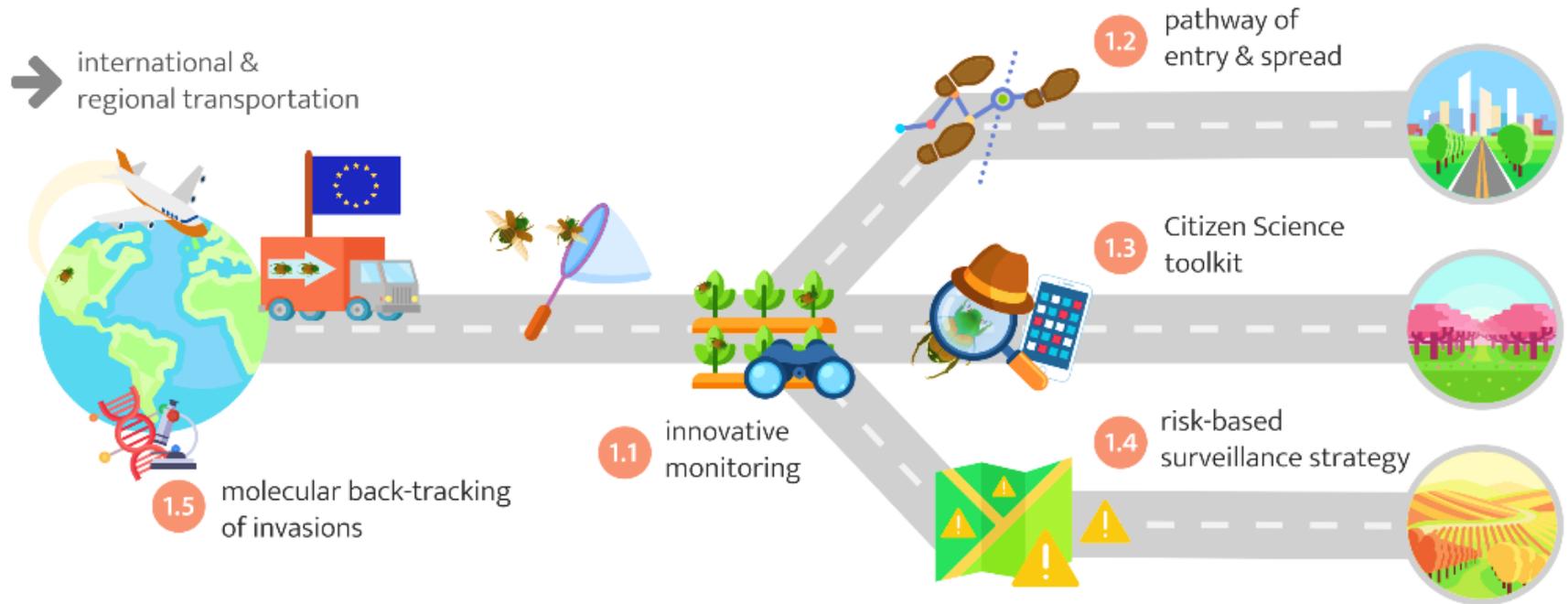
BLW
EPSD

Work packages of IPM-Popillia



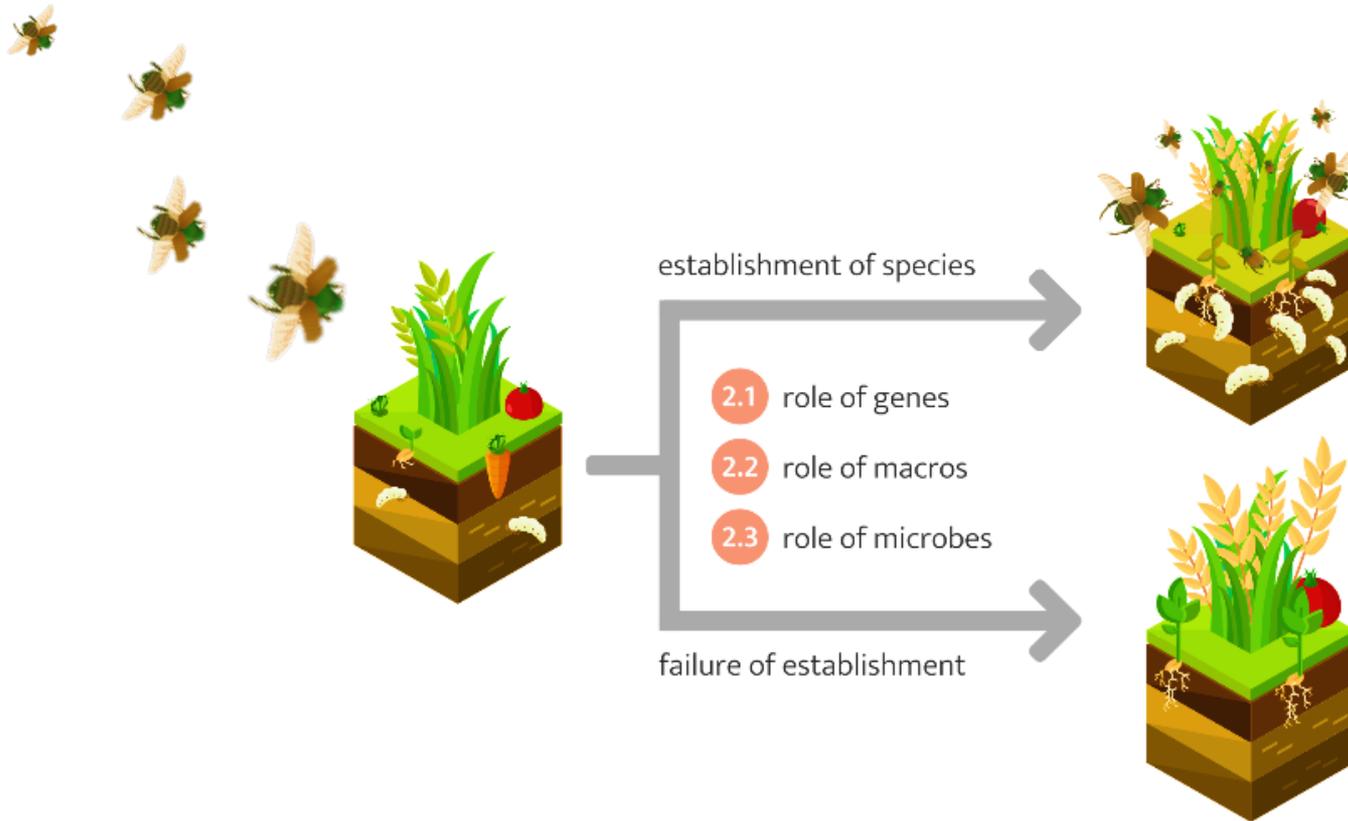


WP1: Identifying the Japanese beetles' pathways of entry and spread





WP2: Understanding the drivers of Japanese beetles' population development





WP3: Providing an IPM-Toolbox for Japanese beetle control

- **Confining spread of the pest**

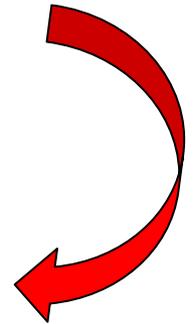


establishment of species

failure of establishment



- 3.5 low-risk sprays
- 3.1 EPNs
- 3.2 EPFs



- **Preventing build-up of high pest population densities**



1st experiment Pj grub control in Switzerland



- Entomopathogenic fungus for biological control of Japanese beetle larvae
- «traditional» application of fungus colonized barley kernels, method developed for control of cock chafers and June beetles
- *Metarhizium brunneum* strain «Bipesco5» («GranMet P»)
- 5×10^{13} spores/ha, about 60kg of FCBK/ha



Entomopathogenic fungi for control of Pj grubs

Evaluation of soil samples planned for **March/ April 2021**

- Estimation of *Metarhizium* colonies per g of soil
- Estimation of number of grubs per m²
- Percentage of mycosed grubs collected from plots



**Thank you for your
attention!**

**Questions,
comments ?**

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