05/10/2022

#### **Review of the EFSA's bee Guidance Document**

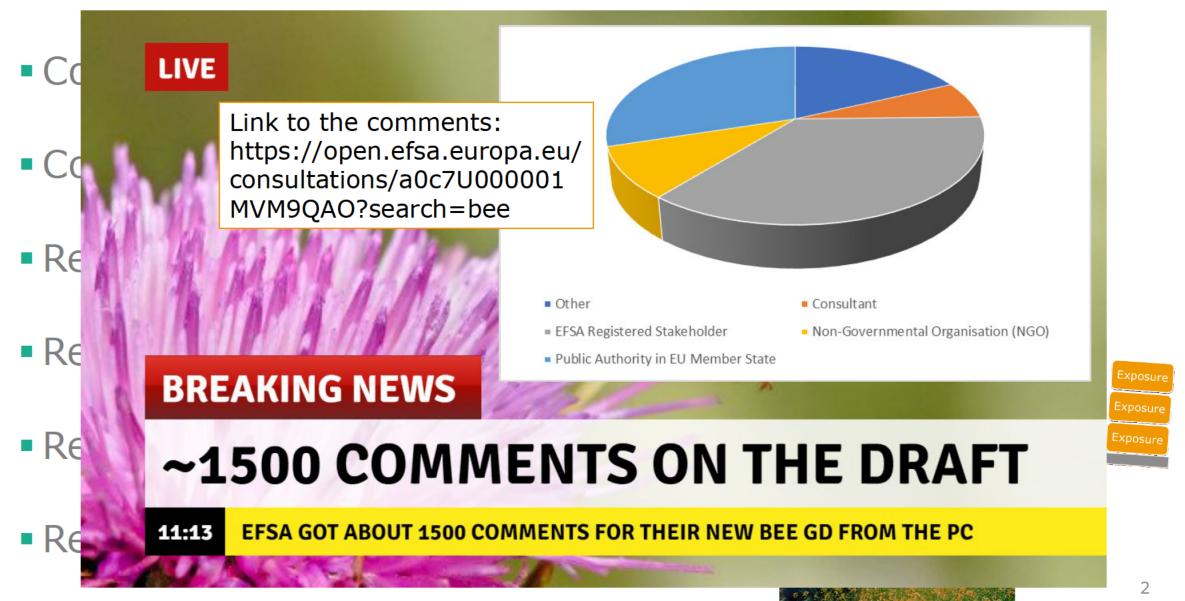
Senior Scientific Officer, Pesticide Unit, EFSA



Trusted science for safe food

#### Execution of the ToRs of the mandate

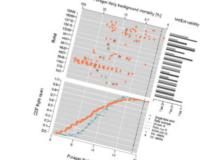




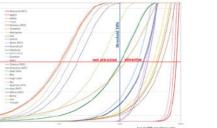
## Execution of the ToRs of the mandate

- Consider feedback from stakeholders
- Consider SPG from RM
- Review bee background mortality
- Review crop attractiveness
- Review RA methodologies
- Review requirements for higher tier



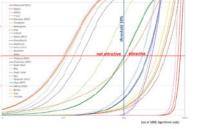


Hazzard



 $\mathbf{O}$ 





### What have not been changed



#### Scope

for Regulation (EC) 1107/2009 for direct effects and with the focus on chemicals



### Dust drift

progress on the draft GD on seed treatments is still awaited



- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered



# European Food Safety Authority

#### New SPG

- Water scenario reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

Dimen- sions	Honey bees	Bumble bees	Solitary bees
Ecological Entities	Colony	Colony	Population
Attribute	Colony strength	Colony strength	Population abundance
Magnitude	≤ 10%	Undefined	Undefined
Temporal scale	Any time	Undefined	Undefined
Spatial scale	Edge of field	Edge of field	Edge of field



- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

- Literature and existing field studies have been analysed
  - physiological needs
  - importance of exposure via water
  - practical issues
- The conclusion is relevant for the context of this guidance document (including the SPG and the ExAG)



- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

- New exposure models
  - reparameterization of key parameters (data collection, EKE)
  - new parameters involved (Bsf, PFF, LF)
- Multiple applications considered
- Pre-flowering and during flowering applications differentiated



- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

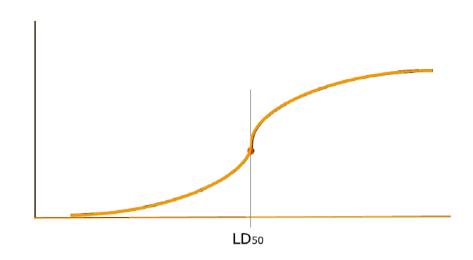
- Clear list of parameters that might be refined
- Guidance/considerations for the methods of refinements provided
- Clear guidance for the 'exposure field studies'



- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

# Full dose-response to be considered

- median lethal dose (LD50/LDD50)
- slope

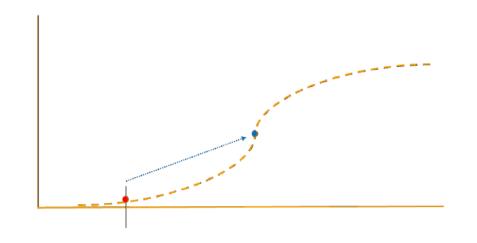




- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

## Worst-case slope agreed

- limit tests
- technical issues with testing (e.g. solubility)





- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

# Separate factors to extrapolate from HBs to

- small bw BB
- small bw SB
- Extrapolation within the bee groups
  - B. terrestris to small bw BB
  - Osmia spp. to small bw SB

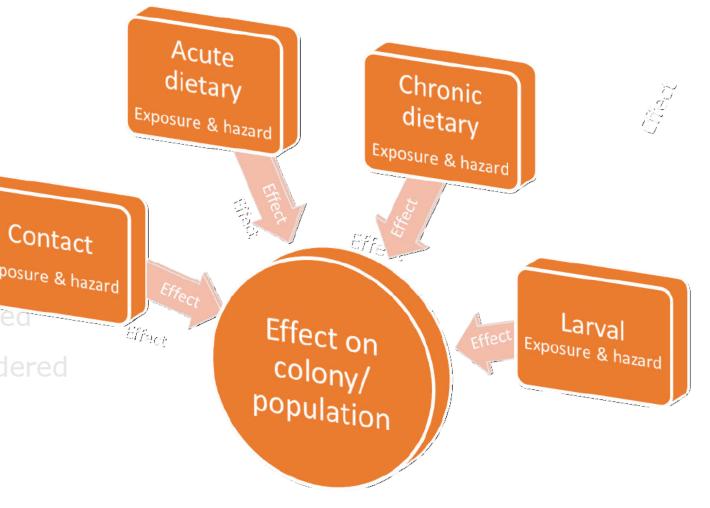


- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

- Starting point is the existing chronic study
- Elaborated workflow with different steps and options
- Considerations for lifelong effects on
  - summer bees
  - winter bees

- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsider
- Extrapolation beyond tested range Exposure & hazard
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered







- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

- Starting points are the existing studies
- Elaborated workflow with different steps and options



- New SPG
- Water scenarios reconsidered
- Exposure estimations updated
- Detailed guidance for Tier 2 options
- Hazard characterization reconsidered
- Extrapolation beyond tested range offered
- Extrapolation between species updated
- `accumulative toxicity' (TRT) reconsidered
- RA method reconsidered
- Clear workflow for sublethal effects
- Strategy for higher tier tests
- Approach for statistics reconsidered

- Guidance/considerations for the methods (existing methods considered)
- Clear list of endpoints
  - linked to the SPG as far as it was defined



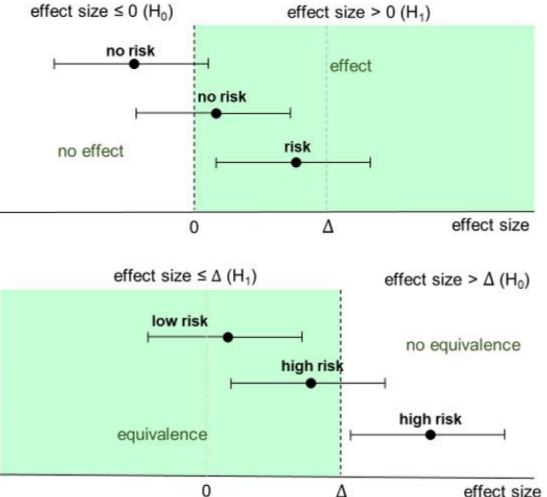
- New SPG
- Water scenarios reconsider
- Exposure estimations upda <sup>p</sup>
- Detailed guidance for Tier 2<sup>8</sup>
- Hazard characterization rec
- Extrapolation beyond teste
- Extrapolation between speci
- `accumulative toxicity' (TRT)
- RA method reconsidered
- Clear workflow for sublethal
- Strategy for higher tier tests
- Approach for statistics reconsidered

#### Difference test

- $p > \alpha$ : effect not proven
- $p > \alpha$ : effect not proven
- $p < \alpha$ : effect proven

#### Equivalence test

- $p < \alpha$ : equivalence proven
- $p > \alpha$ : equivalence not proven
- $p > \alpha$ : equivalence not proven





Digest the comments from the PC – autumn 2022

- Organize/structure the comments
- Answer to the comments
- Identify issues to be reflected/subject of change
- Review the draft winter-spring 2023
  - WG discussions
  - Corrections/re-drafting
- Finalize drafting spring 2023 (?)
- Issue and inform RMs before summer 2023 (?)



#### Stay connected





#### Subscribe to

efsa.europa.eu/en/news/newsletters efsa.europa.eu/en/rss



#### **Receive job alerts**

careers.efsa.europa.eu – job alerts

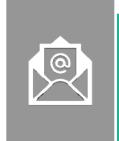


#### Follow us on Twitter

@efsa\_eu @plants\_efsa @methods\_efsa @animals\_efsa

# Ĭn

Follow us Linked in Linkedin.com/company/efsa



#### Contact us