

Research needs to improve ecological risk assessment in Brazil



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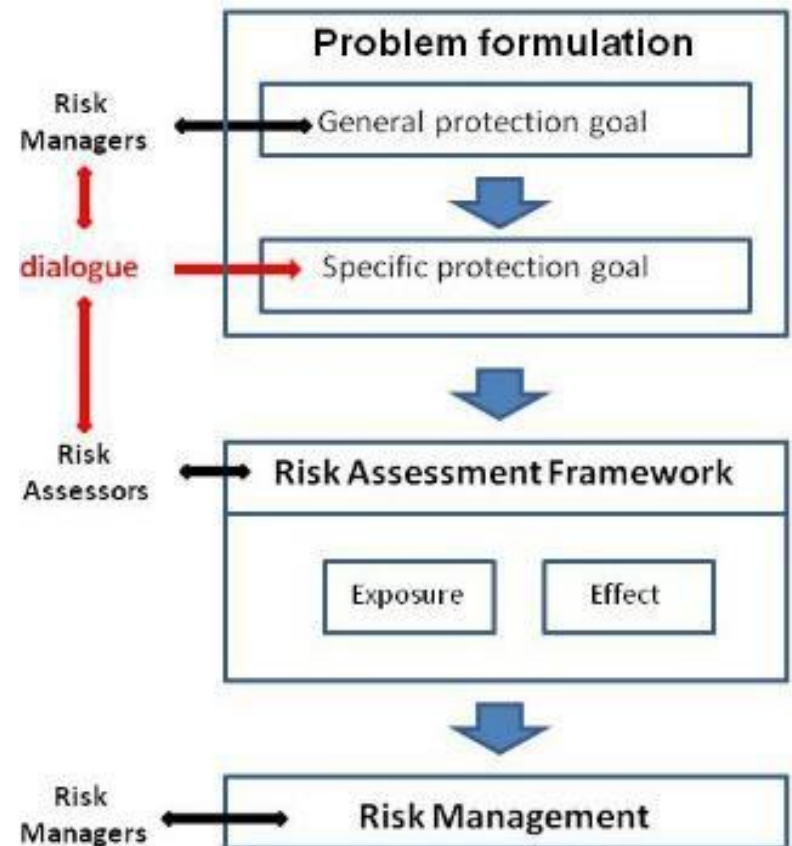
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Current status of Environmental Risk Assessment of pesticides in Brazil

Risk assessment procedures started to be developed in 2010 (so, this is relatively a new topic for Brazil).

Carried out by Ibama from 2012:

- New active ingredients
- Reevaluation process (neonicotinoids).



Working Groups for risk assessment of pesticides

- 2015: 2 Working Groups coordinated by Ibama;
- Pollinators and aquatic organisms;
- Government, academia & industry;
- Brazilian regulations survey;
- General Protection Goal.



Aquatic organisms



Only Tier 1: Worst case scenarios

US EPA Approach: exposure assessment and risk characterization

- Estimated Environmental Concentrations (EECs): GENEEC;
- Toxicity inputs requested by Ordinance Ibama nº 84 (Algae, microcrustacean and fish – acute and chronic);
- Risk Quotient (EEC/toxicity) compared to the same Levels of Concern (LOCs) established by USEPA.

Pollinators



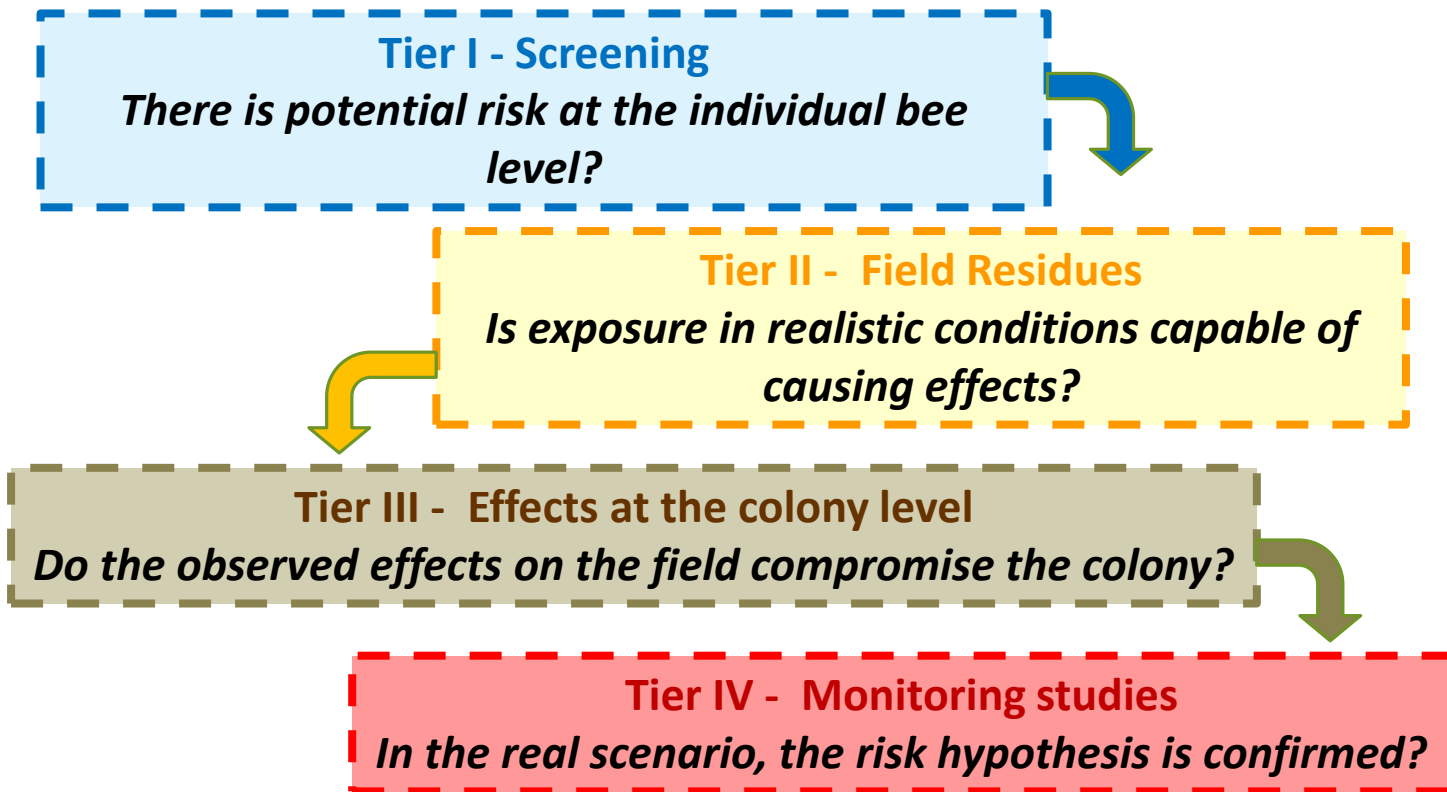
IN (Normative Instruction) nº 02,
from February, 10th,
2017.



Guidance of
Ecotoxicological Risk
Assessment of
Pesticides for Bees

Available on
<http://www.ibama.gov.br/agrotoxicos/reavaliacao-ambiental>

Pollinators



Gaps in knowledge

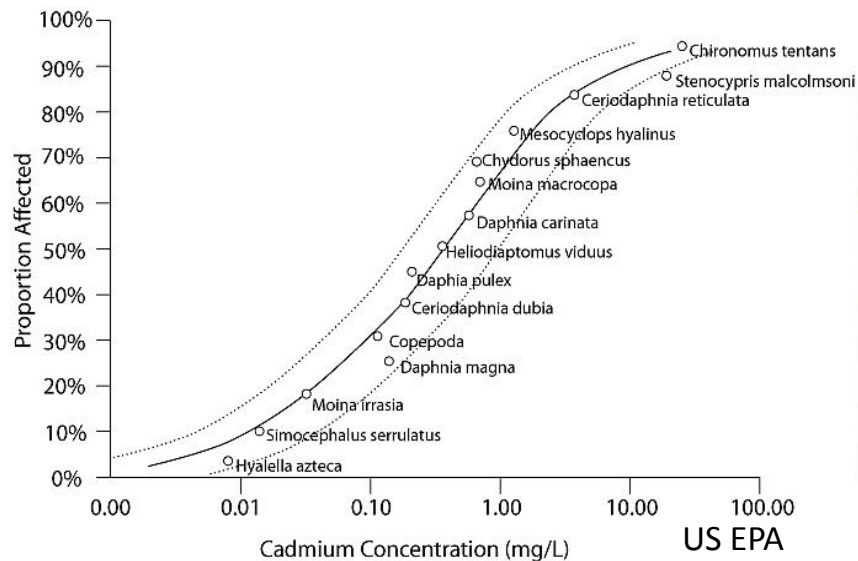
A lot of uncertainty and needs:

- How native species are sensitive to pesticides?
- In what extension standard species can be used as good surrogates to protect native species?
- What are the levels of exposure in Brazilian scenarios?
- How the exposure routes can be different for native species?

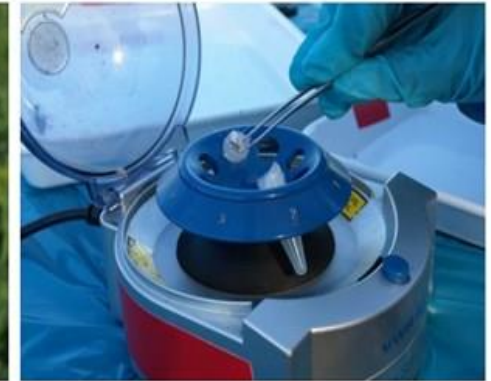


Research needs

SSD's curves for native species



Residue studies in relevant matrices



Eurofins

Research needs

US EPA



Monitoring
of water
bodies

Brazilian soils

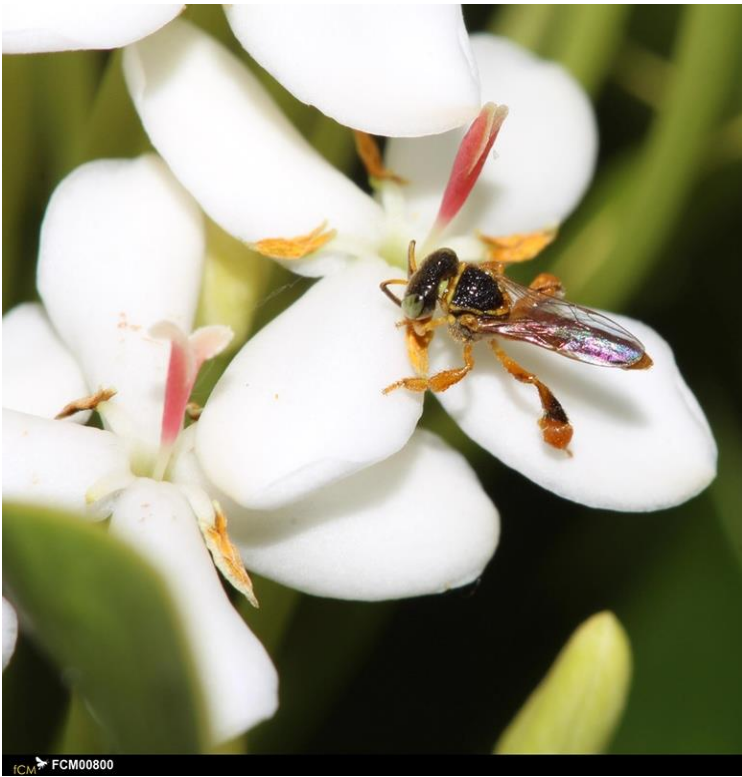


Soilnews



Validation
of spray
drift
models

Focus on native non-*Apis* bees:



- Matrix of species selection (to be published soon): provided the basis to elect meliponines (stingless bees) as a priority group, and solitary bees as a second step;
- call for research in order to fill the gaps and assess the need of inclusion of a native bee in the risk assessment scheme and development/adaptation of protocols and tools.

Thank you for your attention!

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DIQUA - Environmental Quality Division

CGASQ - General Coordination of Evaluation and Control of Chemicals and Hazardous Products

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http: <http://www.ibama.gov.br/agrotoxicos/reavaliacao-ambiental>