



THE ENVIRONMENTAL RISK ASSESSMENT OF BIOCIDES

REGULATORY CHALLENGES AND
SCIENTIFIC SOLUTIONS



Regulatory issues regarding the BPD, Product Authorisation and the new Regulation

Regulatory point of view

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1. Biocidal Products Directive: regulatory basis and experience with environmental risk assessment in the Review Program
2. Biocidal Products Regulation
3. Conclusions on regulatory challenges



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Regulatory basis

- “Ensure high and harmonised level of protection for the environment” → “no unacceptable effects” (Article 10) → $PEC/PNEC < 1$ for STP, aquatic compartment, soil compartment and secondary poisoning (Annex VI)
- “normal use” and “realistic worst-case scenario”
- “In the light of current scientific and technical knowledge “



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Regulatory basis

- Annex I inclusion of active substance followed by authorisation of the biocidal product
- Review Program on existing active substances (14 May 2000) and new active substances
- Review Program: 275 active substances with 700 active substance – Product Type combinations (total 23 PTs)
- Annex I inclusion is per active substance – Product Type combination



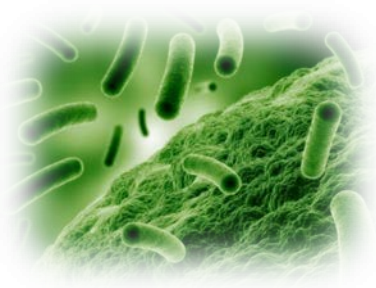
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Biocides characteristics

- Biocides is small
- Biocides is complex and it's all about environment and exposure assessment
- Biocides is relatively new EU regulatory framework but sometimes also national
- Member States are responsible for evaluations up to Annex I inclusion
- Limited role of Commission in peer review process



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It seemed so easy

- Dossiers submitted in 2004 – 2008
- A Review Program of 10 years
- Extensive package of guidance developed
- Transitional phase over in 2014



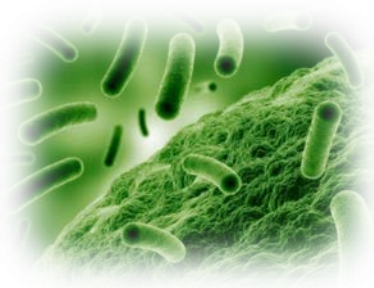
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Rodenticides

- 14 actives (fumigants, corn cob, anticoagulants)
- Primary and secondary poisoning
- Comparative assessment



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Wood preservatives

- 38 actives (fumigants, metal salts, quats, creosote, 'pesticides')
- Leaching distance and leaching rate determination
- Acceptance of risks in TIME 1
- New scenarios: house, railway sleepers, wooden pellets, termite control (foundation and trench)
- Product authorisation: efficacy of topcoat as risk mitigation measure



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Insecticides

- 32 actives (fumigants, silicon dioxide, micro-organisms, Margosa extract, pyrethroids, neonicotinoids)
- ESD average consumption scenario revised: numbers of private houses, commercial buildings and hospitals for the 'standard STP', surface and treated area, cleaning efficiency, area susceptible to wet cleaning, simultaneity factor



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Repellents and attractants

- 8 actives (pheromone, CO₂, DEET, nonanoic acid, methyl nonyl ketone)
- Tonnage scenario
- Scenarios for cat and dog repellents in private gardens, swimming scenario



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Antifoulings

- 4 actives (all booster biocides)
- Sediment risk assessment
- Cumulative assessment for in-service, maintenance and repair and new build
- Parameter setting for MAMPEC



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In-can preservatives

- Very limited experience
- Cumulative assessment



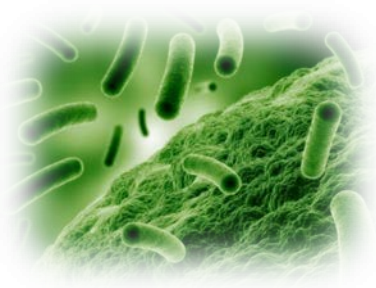
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Control of other invertebrates

- Very limited experience
- Fumigant: recolonisation



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To come ...

- All or almost all actives for Product Types 01 to 05, 06, 07, 09, 10, 11, 12, 13, 22
- Around 160 Competent Authority Reports submitted to Commission for peer review for 114 active substances so 540 to come ...



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Regulatory science challenges

- Consensus building at Technical Meeting within the legal framework of the BPD according to the relevant guidance
- Harmonisation: similar substances, between Product Types, EU regulatory frameworks and ... between Member States
- Transparency and consistency



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Observations Review Program

Progress of Review Program:

- Evaluation of the same active substance under different Product Types → new data or new guidance → impact on List of Endpoints relevant for product authorisation
- Consistency versus state-of-the-art scientific and technical knowledge versus legitimate expectations of applicants
- Refinement of risk assessment during peer review process



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Observations Review Program

- Exposure assessment: considerable package of technical guidance but often revised or new scenario developed → for each 'new PT' there is a new start
- Realistic worst-case?
 - wood preservatives (10 → 50 cm); insecticides (revised defaults ESD) and antifoulings (wider environment scenario)
 - estimations versus monitoring
- Proportional?



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Biocidal Products Regulation

- Commission proposal 2009 → Second Reading → Foreseen application date September 2013
- ECHA takes over role of DG JRC
- Principle will not change: approval of active substance followed by product authorisation (national or Union)
- Member States will be responsible for evaluation



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Other elements of new Regulation

- Scope
- Mandatory data sharing for testing with vertebrate animals
- Access to the active substance dossier
- Technical equivalence
- Improve legal basis for data waiving → exposure based waiving for active substances and biocidal products → delegated/implementing act



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New elements compared to BPD

- Evaluation criteria
 - Exclusion and substitution
 - Comparative assessment
- Principles of environmental risk assessment as laid down in Annex VI will not change including data requirements



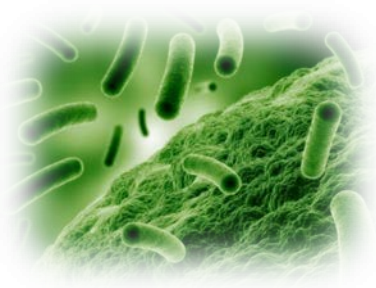
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Biocidal Products Regulation

- Conditions for approval of active substance (Article 4 refers to 18(1)(b) taking into account 18(2) and 18(5)):
 - ‘New’ criterion: no unacceptable effects due to long range transport
 - ‘New’ factor to consider: cumulative and synergistic effects
 - ‘New’ factor to consider: authorisation possible when criteria are not fully met but disproportionate negative impacts for society



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Biocidal Products Regulation

- Exclusion criteria: CMR Cat 1A or 1B, endocrine disruptor, vPvB and PBT (Article 5.1)
- Derogation (Article 5.2)



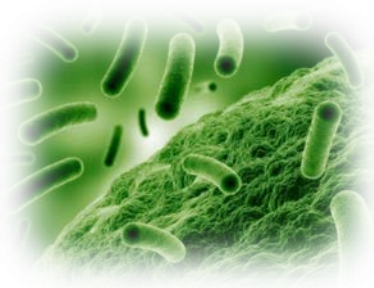
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Biocidal Products Regulation

- Substitution criteria (Article 10):
 - One of the exclusion criteria
 - Significantly higher toxicity
 - Two out of three P, B and T
 - Concerns related to nature of critical effect which together with use pattern leads to cause for concern even with very restrictive risk mitigation measures
 - Significant amount of non-active isomers or impurities



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Comparative assessment

- If biocidal product contains an active substance that is a candidate for substitution a comparative assessment is required at product authorisation (Article 22)
- Prohibit or restrict if other biocidal product or non-chemical control with significantly lower risk under several conditions (same efficacy and no other economic or practical disadvantages and no resistance concerns)



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Future regulatory challenges

- Substitution criteria: how and when to apply?
Technical guidance will be needed
- P and B assessment for biocides: temperature correction, photolysis, lab versus field studies, lipid normalised BCFs
- Cumulative and comparative assessment: need to develop suitable and pragmatic methods



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Cumulative assessment

- Commission point of view under BPD: relevant for Annex I inclusion stage but not on a routine basis
- New regulation: no definition
- What to do if $PEC/PNEC > 1 \rightarrow$ WFD and REACH (draft CoRAP)
- Do all releases end up in the same STP?



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Conclusions

- New Regulation: no major impact on environmental risk assessment
- Review Program: still a long road ahead ...
- The new Regulation:
 - approval of actives is becoming more complex
 - necessary to have streamlined procedures
 - added value of a central organisation