Aquatic plant Models for pesticide Risk Assessment (AMoRA)

Pre-proposal for a SETAC Europe Technical Workshop

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(we could consider this as an activity of a PLANT recovery WG?)
Workshop topic

The use of macrophyte and algae models for environmental risk assessment of plant protection products in the EU


http://www.projectenaew.wur.nl/charisma/
Background / motivation

• See recovery presentation...

• Effect models as higher tier option to supplement experimental approaches, e.g. in order to extrapolate effects and recovery
  – to longer time scale
  – to field situations or between field situations
  – to other exposure scenarios

• Some models are available but uncertainty on which to use, how to use and how the model applications are accepted for the risk assessment
Existing challenges

• Quality of the models
  – Relevance of the species modelled?
  – Relevance of the processes included?
  – Validation sufficient?

• Ecological scenarios
  – What are realistic environmental conditions which can linked with the exposure scenarios and which can be considered to be together representative for Europe

• From Specific to Operational or Quantitative Protection Goals
  – What is e.g. a 'small' or 'medium' effects and what would be an acceptable time period for recovery (how many 'weeks' or 'months'?)

• The remaining uncertainty
  – Do mechanistic models introduce additional uncertainty into the risk assessment or do they reduce uncertainty compared to e.g. the use of the ErC50 / 10 compared to a PECmax?
Example for challenge 3 and 4

- Let’s assume we have a well documented and validated model providing the following output for 3 scenarios

If this is the exposure level to be assessed, what is the margin of safety needed?

Maximum deviation of biomass to control [%]

Unacceptable large effect?

Acceptable duration of small or medium effects?

Acceptable negligible effect?
Workshop objectives

• Review available **models**
  – Agree on a set of models suitable for risk assessment already
  – Recommend models to be developed or model refinements if needed
  – Indicate if validation is sufficient or needs more effort

• Define a set of **ecological scenarios** linked to FOCUS scenarios

• Provide decision criteria (**Operational Protection Goals**)  

• Provide guidance on how to deal with remaining uncertainty (*assessment factor* or *margin of safety*)
Participants

• Invitation only
• SETAC tripartite balance among academia, business and government
• Ecotoxicologists, ecologists, modelers, risk assessors, risk managers
• Focus on European risk assessment, but include participants from outside Europe
Benefit

- by providing a set of agreed models, scenarios and guidance how to use these in higher tier assessments, the workshop will allow a more reliable risk assessments for macrophytes and algae.
Time lines

• Now:
  – discussion on the pre-proposal, collecting comments and suggestions
  – Set up a first list of people interested to participate in such a workshop
• Within the next 2 weeks:
  – consider the comments and submit the pre-proposal to the council
• After approval
  – Establish an SC and elaborate a full proposal
• Spring 2016
  – Intended date for the workshop