

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 16<sup>th</sup> meeting of the Working Group on TK-TD for aquatic organisms

Held on the 29-30 May 2018, Copenhagen

(Agreed on 7<sup>th</sup> June, 2018)

- **Working Group Members:**

(Ivana Teodorovic-Chair)

(Theo Brock)

(Nina Cedergreen)

(Sabine Duquesne)

(Andreas Focks)

(Melissa Reed)

(Sandrine Charles)

(Michael Klein)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: Maria Arena and Alessio Ippolito

- **Others:**

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

#### **4. Scientific topic(s) for discussion<sup>4</sup>**

Scientific Opinion on the state of the art of Toxicokinetic Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms ([EFSA-Q-2012-00960](http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960)).

##### **4.1. Main discussion**

The working group discussed the latest draft version of most of the chapters and agreed on how to finalise the entire Opinion. Comments received by the Pesticide Steering Network were also discussed and replies finalised.

#### **5. Workplan**

The Opinion is planned for adoption during the PPR plenary meeting at the end of June.

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<sup>4</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 15<sup>th</sup> meeting of the Working Group on TK-TD for aquatic organisms

**Held on the 17-19 April 2018, Novi Sad (RS)**

**(Agreed on 27 April 2018)**

- **Working Group Members:**

(Ivana Teodorovic-Chair)

(Theo Brock)

(Sabine Duquesne)

(Andreas Focks, via TC)

(Melissa Reed)

(Sandrine Charles)

(Nina Cedergreen)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: Maria Arena and Alessio Ippolito

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

#### **4. Scientific topic(s) for discussion<sup>4</sup>**

Scientific Opinion on the state of the art of Toxicokinetic Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms ([EFSA-Q-2012-00960](http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960)).

##### **4.1. Main discussion**

The working group discussed the comments received by the Pesticide Steering Committee (PSN) and the changes triggered in the Opinion following that consultation.

#### **5. Workplan**

The workplan, in particular allocation of comments and related changes in the Opinion, was discussed.

#### **6. Next meeting(s)**

The WG will hold a final meeting in May, 29-30 in Copenhagen.

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<sup>4</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>



## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 14<sup>th</sup> meeting of the Working Group on TK-TD for aquatic organisms

**Teleconference Held on the 23 of February 2018, Parma (Italy)**

**(Agreed on 30<sup>th</sup> March 2018)**

#### Participants

- **Working Group Members:**

(Ivana Teodorovic-Chair)

(Theo Brock)

(Sabine Duquesne, via TC)

(Melissa Reed)

(Sandrine Charles)

(Nina Cedergreen)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: Maria Arena, Alessio Ippolito

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

#### **4. Scientific topic(s) for discussion<sup>4</sup>**

Scientific Opinion on the state of the art of Toxicokinetic Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms ([EFSA-Q-2012-00960](http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960)).

##### **4.1. Draft chapters**

The working group discussed the latest draft of the Opinion before the consultation with the Pesticide Steering Committee foreseen to be launched at the beginning of March.

#### **5. Workplan**

The workplan was discussed and agreed.

#### **6. Next meeting(s)**

The next meeting will be in Novi Sad on the 17-19 of April.

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<sup>4</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 13<sup>th</sup> meeting of the Working Group on TK-TD for aquatic organisms

**Held on the 8-9 February 2018, Parma**

**(Agreed on 19 February 2018)**

- **Working Group Members:**

(Ivana Teodorovic-Chair)

(Theo Brock)

(Sabine Duquesne, via TC)

(Andreas Focks)

(Melissa Reed)

(Sandrine Charles)

(Michael Klein)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: Maria Arena and Alessio Ippolito

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

- **Others:**

SCHER Unit: Jean Lou Dorne presented an updated on his project on TD, PK-PB, and related issues.

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

#### **4. Scientific topic(s) for discussion<sup>4</sup>**

Scientific Opinion on the state of the art of Toxicokinetic Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms ([EFSA-Q-2012-00960](http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960)).

##### **4.1. Main discussion**

The working group discussed the latest draft version of most of the chapters and agreed on solutions for addressing the large majority of them. The chapter specifically describing models for survival (GUTS) and sub-lethal effects on animals (DEBtox) were finalised. The introductory chapter on TKTD model, and their implication in the risk assessment were finalised as well.

#### **5. Workplan**

The workplan, in particular the preparation for the next meeting and the timeline for the consultation with the Pesticide Steering Network, was discussed and agreed.

#### **6. Next meeting(s)**

The WG will hold a Teleconference on 23 February.

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<sup>4</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>



## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 12<sup>th</sup> meeting of the Working Group on TK-TD for aquatic organisms

Held on the 23<sup>th</sup> January 2018, Via teleconference

(Agreed on 1 February 2018)

- **Working Group Members:**

(Ivana Teodorovic-Chair)

(Theo Brock)

(Nina Cedergreen)

(Sabine Duquesne)

(Andreas Focks)

(Melissa Reed)

(Sandrine Charles)

(Michael Klein)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: Maria Arena and Alessio Ippolito

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

#### **4. Scientific topic(s) for discussion<sup>4</sup>**

Scientific Opinion on the state of the art of Toxicokinetic Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms ([EFSA-Q-2012-00960](http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960)).

##### **4.1. Draft checklists for the evaluation of the models**

The working group discussed the latest draft version of the checklists developed with the aim of helping the risk assessor for a comprehensive evaluation of the model within the scope of the Opinion. The checklists were developed starting from the one included in Appendix B of the Opinion of the PPR Panel on Good modelling practice.

#### **5. Workplan**

The workplan, in particular the preparation for the next meeting and the timeline for the consultation with the Pesticide Steering Network, was discussed and agreed.

#### **6. Next meeting(s)**

The next meeting will be in Parma on 8-9 February.

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<sup>4</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 11<sup>th</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

Held on the 8<sup>th</sup>-10<sup>th</sup> January 2018, Lyon (France)

(Agreed on the 24 January 2018)

- **Working Group Members:**

(Ivana Teodorovic-Chair)  
(Theo Brock)  
(Nina Cedergreen-via teleconference on 10 January)  
(Sabine Duquesne)  
(Andreas Focks)  
(Melissa Reed)  
(Sandrine Charles)  
(Michael Klein-via teleconference on 8-9 January)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: Maria Arena, Alessio Ippolito

- **Others:**

Not Applicable

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.



### **1. Welcome and apologies for absence**

The Chair welcomed the participants.

### **2. Adoption of agenda**

The agenda was adopted with a change in the order of the items.

### **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

#### **4. Scientific topics for discussion**

Scientific Opinion on the state of the art of Toxicokinetic-Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms ([EFSA-Q-2012-00960](#))

##### **4.1. Draft chapters revision**

The Working Group discussed the latest draft version of the chapters to be included in the Opinion

##### **4.2 Checklists**

The Working Group discussed the checklists for the different models developed adapting the checklist presented in the Opinion on Good Modeling Practice (EFSA PPR Panel, 2014)

#### **5. Time plan**

The experts talked about the time plan for preparing the opinion for the consultation with the Pesticide Steering Network (PSN).

#### **6. Workplan**

The workplan was discussed and agreed.

#### **7. Next meeting(s)**

The Working Group will held a teleconference in February, 23..



## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 10<sup>th</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

**Held on 11<sup>th</sup> December 2017, via Teleconference**

**(Agreed on 3 January 2018)**

- **Working Group Members:**

(Ivana Teodorovic- Chair)

(Theo Brock)

(Nina Cedergreen)

(Sabine Duquesne)

(Andreas Focks)

(Melissa Reed)

(Sandrine Charles)

(Michael Klein)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

Pesticides Unit: Maria Arena and Alessio Ippolito

- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

#### **4. Scientific topic(s) for discussion<sup>4</sup>**

Scientific Opinion on the state of the art of Toxicokinetic Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms ([EFSA-Q-2012-00960](http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960)).

##### **4.1. Draft chapters and sections**

The working group discussed the latest draft version of the chapter laying down the criteria for the model evaluation. In addition a section on the linking between exposure and effects was also discussed.

#### **5. Workplan**

The workplan, in particular the preparation for the next meeting was discussed and agreed

#### **6. Next meeting(s)**

The next meeting will be in Lyon on 8-10 January.

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<sup>4</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 9<sup>th</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

**Held on 13-15<sup>th</sup> November 2017, Wageningen (The Netherlands)**

**(Agreed on 6 December 2017)**

#### **Participants**

- **Working Group Members:**

(Ivana Teodorovic-Chair)

(Theo Brock)

(Nina Cedergreen)

(Sabine Duquesne)

(Andreas Focks)

(Melissa Reed)

(Michael Klein)

- **Hearing Experts<sup>1</sup>:**

(Roman Ashauer) (Item 6)

(Tjalling Jager) (Item 6)

(Thomas Preuss) (Item 6)

(Sandrine Charles) (all the items)

- **European Commission and/or Member States representatives:**

Not Applicable

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

- **EFSA:**

Pesticides Unit:

(Maria Arena)

(Harry Byers)

(Alessio Ippolito)

- **Others:**

Not Applicable

### **1. Welcome and apologies for absence**

The Chair welcomed the participants.

### **2. Adoption of agenda**

The agenda was adopted without changes.

### **3. Declarations of Interest of Working Group members**

In accordance with EFSA's Policy on Independence and Scientific Decision Making Processes and the Decision of the Executive Director on Declarations of Interest, EFSA screened the Annual Declarations of Interest filled in by the working group members invited for the present meeting. For further details on the outcome of the screening of the ADoI, please refer to Annex I.

#### 4. Mandate and terms of reference

EFSA and the chair updated the WG about the latest discussion about the change of mandate.

#### 5. Scientific topics for discussion

Scientific Opinion on the state of the art of Toxicokinetic Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms ([EFSA-Q-2012-00960](#)).

#### 6. Hearing expert session

7. A meeting was organised with hearing experts, in order to clarify some questions arisen during the development of the Opinion.

- GUTS terminology

The upcoming publication of an e-book on GUTS was discussed in order to align the terminology in the Opinion. It was clarified that the mathematical equations haven't changed; few changes were introduced for sake of clarity and to avoid ambiguity (e.g. making sure that one symbol always means the same). It was agreed that the draft e-book can be shared with the WG.

- The concept of Multiplication factor

The WG introduced the term of 'multiplication factor' which would replace the term 'margin of safety' used for example in Ashauer et al. (2013). The concept was further explained and clarified and it was overall agreed.

- Software Implementation

The use of a standard software vs an user-defined implementation was discussed. It was overall agreed that a standard user-friendly and easy to install software is preferable for regulatory uses. The software could be an .exe file protected, but the source will be open. The need for a version control group was also agreed upon as done for the FOCUS software. The role of EFSA in the development of the standard GUTS software was discussed.

- Validation

The possible requirements for the validation of the model output were discussed. It was suggested to use as validation criterion the time until there is 95% damage repair as it works for both GUTS IT and SD. It was pointed out that the validation shouldn't be too strict as some criteria may not be always experimentally feasible, especially for vertebrates (fish). An alternative approach for the validation dataset is to check whether there are at least three different levels (multiplication factors) standing on the linear part of a dose-response curve. This should at least be verified for two profiles.

The possibility of using available vertebrate bioassays for GUTS validation was explored. However, mortality is not often assessed in chronic test as per test design.

The interval between two or more peaks within a validation experiment was also discussed. Considering that designing a perfect experiment for validation might not work, a suggestion could be to address this



uncertainty by an additional Assessment factor. However, the TKTD should be used according to the risk assessment scheme proposed in the available Guidance document (EFSA PPR Panel, 2013).

The WG will explore the possibility of recommending only one additional experiment for vertebrate. A suggestion could also be to use only one dataset for fish but for a validation do a bootstrapping or cross-validation approach.

Overall, it was agreed that a set of validation criteria (i.e. criteria for the validation data and for the evaluation of the quality of the model predictions) for macroinvertebrates and plants will be added in the opinion, and another set would be added for fish to account for the needs to reduce the number of vertebrate testing. A flowchart on the optimal validation dataset for validation should be added to the opinion.

- Qualitative and Quantitative criteria for evaluation of the model prediction

Among the possible criteria for evaluating the model prediction, the qualitative check (visual check) was agreed upon. In addition, a suggestion was to include several criteria for evaluation of the model prediction. However, this may in some cases lead to inconsistent results and therefore different conclusion may be drawn about the same model.

It was discussed that the model is fitted to deaths-per-time-interval, and therefore comparing observed and predicted survival (frequency) is a bit awkward. However, the latter might be more relevant for ERA. Chi-squared based significance test could be suitable in the case of TKTD but not to judge the adequacy of a fit for ERA purposes.

Test like R square, which measures the distance between model and data, is formally not applicable to survival data, but may be a practical measure for the purpose of adequacy of a fit. In addition a formalised expert Knowledge to assess the fit of a model could be an option.

- Structural validation

It was pointed out that the sensitivity of individuals may change when they grow in the course (of long) experiments. There is a means to correct the toxicokinetics for change in size (e.g. Gergs et al. 2015), but when not doing this, model calculations based on small individuals are always conservative. Changes of toxicodynamics over time (influenced by different physiological states) are difficult to predict, and will also differ for different modes of action. In any case, such changes would be captured also in chronic or longer-duration experiments at the end.

- Uncertainty

There was a general discussion on how uncertainty captured in the 95% confidence limit of the toxicity estimate is normally dealt with at Tier 1 (only used to dismiss a study if the confidence interval is too wide). Therefore, in principle the same approach should be used for TKTD.

- How to use TK-TD models in risk assessment

The use of the endpoint immobility (e.g. for Daphnia) in GUTS models was discussed. Although this can be done and it is appropriate from an ecological point of view, the data for model calibration and validation should be made consistent, either by removing the immobile individuals in bioassays from the medium or by curating the recorded data to avoid seeing an increase in 'alive' individuals (not immobile any more) as this can make model calibration crashing, especially for GUTS SD. As in the OECD guideline, it is not foreseen to remove immobile individual from the

test medium it is preferable to curate the data when using it for the calibration.

The idea of using LPx or EPx values to build an SSD was shared and discussed. A similar approach was included in the paper by Ashauer et al. (2016).

- Plant and algae model

The WG experts were wondering if there were any implementation examples for *Myriophyllum*. Although a model implementation exists and is available, there was a general consensus that the *Myriophyllum* model is not yet ready to use.

For the algae model, it was discussed and clarified that there is an example (from a PhD thesis) where the model was tested under variable condition (for instance temperature, etc.).

For the *Lemna* model, it was clarified that respiration rate was not ignored when parameterising photosynthesis on growth rates because respiration rate was considered by subtracting it from the growth rate. In addition, it was explained that the model does not consider zero irradiation, because the average irradiation during 24h is taken which is consistent with the OECD test guideline 221.

The temperature and irradiation level provided by FOCUS as input to their model is currently used.

- Other issues

The use of both GUTS SD and GUTS IT was discussed as in many cases GUTS SD seems to be more conservative. However, a number of cases exist where it is the opposite (Ashauer et al. 2013). Therefore, as suggested in the Opinion, both models should always be run and the most conservative should be used.

The DEBtox model is rather standard, but not as rigidly standardised as the standard DEB animal model (Add my Pet database) or GUTS (yet). In the case of DEB animal model, for every species described; there is a very well-detailed parameter set and MATLAB script. This however, might be too complex for regulators without an in-depth expertise in TKTD. It was also discussed that "add my PET" DEB models are not documented according the GMP for every species. This could be a problem if used for regulatory purposes. There was a general consensus that in the Opinion it is not possible to go to the same level of details for DEBtox models as done for GUTS, even if some examples exist and can be considered (publication of Pieters et al. 2006 example of DEBtox in a dossier).

## 8. Draft chapters revision

### 8.1.1. Chapter 4

The working group discussed the latest draft version of chapter 4.

### 8.1.2. Chapter 6

The working group discussed the latest draft version of chapter 6.

### 8.1.3. Chapter 7

The working group discussed the latest draft version of chapter 7.

## **9. Time plan**

The experts talked about a time plan for the delivery of the opinion to the panel.

## **10. Workplan**

The workplan was discussed and agreed.

## **11. Next meeting(s)**

The next meeting will be a Tele-Conference on the 11<sup>th</sup> of December.

## Annex I

### Interests and actions resulting from the screening of Annual Declarations of Interest (ADoI)

CONFLICT OF INTEREST: In the ADoI Prof. Charles Sandrine declared the following interest: Member of the Steering Committee (SC) of the SETAC Interest Group (IG) on Mechanistic Effect Modelling (MeMoRisk). In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, and taking into account the specific matters discussed at the meeting in question, the interest above was deemed to represent a Conflict of Interest.

This results in the invitation of the experts as hearing expert in her personal capacity.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014>

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 8<sup>th</sup> meeting of the Working Group on TK-TD for aquatic organisms

**Held on 30 October 2017, via Teleconference**

**(Agreed on 6 November 2017)**

- **Working Group Members:**

(Ivana Teodorovic-Chair)

(Theo Brock)

(Nina Cedergreen)

(Sabine Duquesne)

(Andreas Focks)

(Melissa Reed)

- **(Michael Klein Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit:

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

(Maria Arena)  
(Alessio Ippolito)

- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants. Apologies were received by Sandrine Charles.

## **2. Adoption of agenda**

The agenda was adopted with a change in the order of the items.

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

#### **4. Scientific topics for discussion**

Scientific Opinion on the state of the art of Toxicokinetic Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms ([EFSA-Q-2012-00960](#)).

##### **4.1 Organization of the meeting with the hearing experts**

The experts discussed and agreed on how to organize the meeting with the technical hearing experts.

#### **5. Next meeting(s)**

The next meeting will be in Wageningen on 13<sup>th</sup>-15<sup>th</sup> November.

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 7<sup>th</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

**Held on the 19-20 September 2017, Parma, Italy**

**(Agreed on 5 October 2017)**

#### **Participants**

- **Working Group Members:**

(Ivana Teodorovic-Chair)  
(Theo Brock)  
(Nina Cedergreen)  
(Sandrine Charles)  
(Sabine Duquesne)  
(Andreas Focks)  
(Melissa Reed)  
(Michael Klein, only on 19 until 2 pm)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: (Maria Arena), (Harry Byers), (Alessio Ippolito)

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts:  
<http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.



- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted with a change in the order of the items.

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

## **4. Agreement of the minutes of the 6<sup>th</sup> Working Group meeting held on 4-5 July 2017 by teleconference**

The minutes of the 6<sup>th</sup> Working Group meeting held on 4-5 July 2017 were agreed.<sup>4</sup>

## **5. Scientific topic(s) for discussion**

### **5.1. Scientific Opinion on the state of the art of Toxicokinetic-Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms<sup>5</sup>**

### **5.2. Draft chapters**

The working group discussed the latest draft version of chapter 5 and the first draft of chapter 6 and 7.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencpolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

<sup>4</sup> <http://www.efsa.europa.eu/sites/default/files/wqs/pesticides/wgTKTDaquaticorganisms.pdf>

<sup>5</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

## **6. Any Other Business**

### **6.1. Workplan**

The workplan was discussed and agreed. The experts discussed the time plan for finalising the Opinion before the consultation of the Pesticide Steering Network (PSN).

## **7. Next meeting(s)**

The next meeting will be in Wageningen on 13-15 November 2017.

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 6<sup>th</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

**Held on the 4-5 July 2017, Parma, Italy**

**(Agreed on 21 July 2017)**

#### **Participants**

- **Working Group Members:**

(Ivana Teodorovic-Chair)  
(Theo Brock)  
(Nina Cedergreen)  
(Sandrine Charles)  
(Sabine Duquesne)  
(Andreas Focks)  
(Melissa Reed)  
(Michael Klein)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: (Maria Arena), (Harry Byers), (Alessio Ippolito)

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts:  
<http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted with a change in the order of the meeting as some experts have other commitment and would like to talk about a specific chapter.

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

## **4. Agreement of the minutes of the 5<sup>th</sup> Working Group meeting held on 8 June 2017 by teleconference**

The minutes of the 5<sup>th</sup> Working Group meeting held on 8 June 2017 were agreed.<sup>4</sup>

## **5. Scientific topic(s) for discussion**

### **5.1. Scientific Opinion on the state of the art of Toxicokinetic-Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms<sup>5</sup>**

EFSA and the chair updated the WG about the latest discussion about the change of mandate.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

<sup>4</sup> <http://www.efsa.europa.eu/sites/default/files/wqs/pesticides/wgTKTDaquaticorganisms.pdf>

<sup>5</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

## **5.2. Draft chapters**

The working group discussed the latest draft version of chapter 3, 4 and 5.

## **6. Any Other Business**

### **6.1. Workplan**

The workplan was discussed and agreed. The experts discussed the time plan for delivering the Opinion to the Panel for the final adoption.

## **7. Next meeting(s)**

The next meeting will be on 19-20 September 2017, in Parma.

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 5<sup>th</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

**Held on the 8 June 2017 by teleconference**

**(Agreed on 30 June 2017)**

#### **Participants**

- **Working Group Members:**

(Ivana Teodorovic-Chair)  
(Theo Brock)  
(Sandrine Charles)  
(Sabine Duquesne)  
(Andreas Focks)  
(Melissa Reed)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: (Maria Arena), (Harry Byers)

- **Others:**

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts:  
<http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes.

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

## **4. Agreement of the minutes of the 4<sup>th</sup> Working Group meeting held on 26-27 April 2017**

The minutes of the 4<sup>th</sup> Working Group meeting held on 26-27 April 2017 were agreed.<sup>4</sup>

## **5. Scientific topic(s) for discussion**

### **5.1. Scientific Opinion on the state of the art of Toxicokinetic-Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms<sup>5</sup>**

### **5.2. Draft chapters**

The working group discussed the latest draft version of chapter 3.

## **6. Any Other Business**

### **6.1. Workplan**

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

<sup>4</sup> <http://www.efsa.europa.eu/sites/default/files/wqs/pesticides/wgTKTDaquaticorganisms.pdf>

<sup>5</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

The workplan was discussed and agreed.

Two Rapporteurs were nominated for this WG.

## **7. Next meeting(s)**

The next meeting will be on 4-5 July, in Parma.



## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 4<sup>th</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

**Held on the 26-27 of April 2017, Lyon, France**

**(Agreed on 17 May 2017)**

#### **Participants**

- **Working Group Members:**

(Ivana Teodorovic-Chair)  
(Nina Cedergreen)  
(Sandrine Charles)  
(Sabine Duquesne)  
(Andreas Focks)  
(Melissa Reed)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: (Alessio Ippolito), (Harry Byers)

- **Others:**

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts:  
<http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

Apologies were received by Theo Brock.

## **2. Adoption of agenda**

The agenda was adopted without changes.

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

## **4. Agreement of the minutes of the 3<sup>rd</sup> Working Group meeting held on 30 March 2017 by teleconference**

The minutes of the 3<sup>rd</sup> Working Group meeting held on 30 March 2017 were agreed.<sup>4</sup>

## **5. Scientific topic(s) for discussion**

### **5.1. Scientific Opinion on the state of the art of Toxicokinetic-Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms<sup>5</sup>**

### **5.2. Presentations**

A number of presentations were held by the expert modellers in the working group as background knowledge.

### **5.3. Draft chapters**

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

<sup>4</sup> <http://www.efsa.europa.eu/sites/default/files/wqs/pesticides/wgTKTDaquaticorganisms.pdf>

<sup>5</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

The working group discussed the latest draft version of chapter 2, 3 and 5.

## **6. Any Other Business**

### **6.1. Workplan**

The workplan was discussed and agreed.

## **7. Next meeting(s)**

The next meeting will be a teleconference on 8<sup>th</sup> June.

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 3<sup>rd</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

**Held on 30 March 2017, by Teleconference**

**(Agreed on 3 April 2017)**

#### **Participants**

- **Working Group Members:**

(Ivana Teodorovic)  
(Theo Brock)  
(Nina Cedergreen)  
(Sandrine Charles)  
(Sabine Duquesne)  
(Andreas Focks)  
(Melissa Reed)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

Pesticides Unit: (Maria Arena), (Alessio Ippolito), (Harry Byers)

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts:  
<http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes.

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

## **4. Agreement of the minutes of the 2<sup>nd</sup> Working Group meeting held on 31 January-1 February 2017, Parma**

The minutes of the 2<sup>nd</sup> Working Group meeting held on 31 January-1 February 2017 were agreed.<sup>4</sup>

## **5. Scientific topic(s) for discussion**

### **5.1. Scientific Opinion on the state of the art of Toxicokinetic-Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms<sup>5</sup>**

### **5.2. Draft chapters**

The working group discussed the latest draft version of chapter 3.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

<sup>4</sup> <http://www.efsa.europa.eu/sites/default/files/wqs/pesticides/wgTKTDaquaticorganisms.pdf>

<sup>5</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

## **6. Any Other Business**

### **6.1. Workplan**

The workplan was discussed and agreed.

## **7. Next meeting(s)**

The next meeting will be in Lyon on 26<sup>th</sup>-27<sup>th</sup> April.

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 2<sup>nd</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

**Held on 31 January-1 February 2017, Parma (Italy)**

**(Agreed on 13 February 2017)**

#### **Participants**

- **Working Group Members:**

(Ivana Teodorovic-Chair)

(Theo Brock)

(Nina Cedergreen-via teleconference, only on 30<sup>th</sup>)

(Sandrine Charles)

(Sabine Duquesne)

(Andreas Focks)

(Michael Klein-only on 30<sup>th</sup>)

(Melissa Reed)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts:  
<http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

Pesticides Unit: (Maria Arena), (Harry Byers)

- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes.

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

## **4. Agreement of the minutes of the 1<sup>st</sup> Working Group meeting held on 8-9 December 2016, Parma**

The minutes of the 1<sup>st</sup> Working Group meeting held on 8-9 December 2016 were agreed.<sup>4</sup>

## **5. Scientific topic(s) for discussion**

### **5.1. Scientific Opinion on the state of the art of Toxicokinetic-Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms<sup>5</sup>**

### **5.2. Presentations**

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

<sup>4</sup> <http://www.efsa.europa.eu/sites/default/files/wqs/pesticides/wqTKTDaquaticorganisms.pdf>

<sup>5</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>



A number of presentations were held by the expert modellers in the working group as background knowledge.

### **5.3. Draft chapters revision**

#### **5.3.1. Chapter 2**

The working group discussed the first draft of chapter 2.

#### **5.3.2. Chapter 3**

The working group discussed the first draft of chapter 3.

## **6. Any Other Business**

### **6.1. Workplan**

The workplan was discussed and agreed.

## **7. Next meeting(s)**

The dates for future meetings were agreed.

A Teleconference will be organised on 20<sup>th</sup> March.

## Scientific Panel on Plant Protection Products and their Residues

### Minutes of the 1<sup>st</sup> meeting of the Working Group on TK-TD and simple food chain models for aquatic organisms

**Held on 8-9 December 2016, Parma (Italy)**

**(Agreed on 3 January 2017)**

#### **Participants**

- **Working Group Members:**

(Ivana Teodorovic-Chair)  
(Theo Brock)  
(Nina Cedergreen)  
(Sandrine Charles)  
(Sabine Duquesne)  
(Andreas Focks)  
(Michael Klein)  
(Melissa Reed)

- **Hearing Experts<sup>1</sup>:**

Not Applicable

- **European Commission and/or Member States representatives:**

Not Applicable

- **EFSA:**

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<sup>1</sup> As defined in Article 17 of the Decision of the Executive Director on the selection of external experts: <http://www.efsa.europa.eu/en/keydocs/docs/expertselection.pdf>.

Pesticides Unit: (Maria Arena), (Harry Byers-only on 8<sup>th</sup>), (Alessio Ippolito)

SCER Unit: (Jean-Lou Dorne-only on 9<sup>th</sup>)

- **Others:**

Not Applicable

## **1. Welcome and apologies for absence**

The Chair welcomed the participants.

## **2. Adoption of agenda**

The agenda was adopted without changes.

## **3. Declarations of Interest of Working Groups members**

In accordance with EFSA's Policy on Independence and Scientific Decision-Making Processes<sup>2</sup> and the Decision of the Executive Director on Declarations of Interest<sup>3</sup>, EFSA screened the Annual Declaration of Interest and the Specific Declaration of Interest filled in by the working group members invited for the present meeting. No Conflicts of Interest related to the issues discussed in this meeting have been identified during the screening process or at the Oral Declaration of Interest at the beginning of this meeting.

## **4. Agreement of the minutes of the Working Group meeting**

Not applicable

## **5. Scientific topic(s) for discussion**

### **5.1. Scientific Opinion on the state of the art of Toxicokinetic-Toxicodynamic (TK-TD) effect modelling and simple food chain models for regulatory risk assessment of pesticides for aquatic organisms <sup>4</sup>**

The Mandate with its related timeline was presented by EFSA to the experts in the working group.

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<sup>2</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencepolicy.pdf>

<sup>3</sup> <http://www.efsa.europa.eu/en/keydocs/docs/independencerules2014.pdf>

<sup>4</sup> <http://registerofquestions.efsa.europa.eu/roqFrontend/questionLoader?question=EFSA-Q-2012-00960>

## **5.2. Background documents**

A number of background documents, including relevant literature, were identified by EFSA and shared with the working group.

## **5.3. Structure of the Opinion and responsibilities**

The Structure of the Opinion was discussed and agreed. Responsibilities for each chapter were also defined.

The terms of reference were also discussed.

## **6. Any Other Business**

### **6.1. Workplan**

The workplan was discussed and agreed.

## **7. Next meeting(s)**

The dates for future meetings were agreed.

The WG will meet on 31<sup>st</sup> January-1<sup>st</sup> February, in Parma.