

AG Name: Aquatic Macrophyte Ecotoxicology Group (AMEG)

Submitted by: Gertie Arts, chair of AMEG

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Council/Board Liaison: World Council

Reporting period: 2011 – 2012

1. Organization

The organization of AMEG is described in the AMEG SOP of the 1st of July 2009 (uploaded on the AMEG website <http://www.setac.org/group/AGAquaticMacrophyte>).

Currently, the AMEG Steering Committee includes 11 members: four from Academia and Business each and three from Government:

Government – Katja Knauer (BLW, CH), Silvia Mohr (UBA, DE), Véronique Poulsen (Anses, FR)

Business – Jo Davies (Syngenta, UK), Margit Dollinger (Bayer CropScience, DE), Jeff Giddings (CSI, US), Stefania Loutseti (DuPont, GR)

Academia – Mark Hanson (University of Manitoba, CA, co-chair), Udo Hommen (Fraunhofer, DE), Chris Wilson (University of Florida, US), Gertie Arts (Alterra, NL, chair).

Chairs are Gertie Arts and Mark Hanson. Mark Hanson is liaison for the SWC. Chris Wilson is contact person for the AMEG website.

2. Activities Summary

Introduction

In the reporting period (2011 – 2012) the AMEG Advisory Group has organized sessions and group meetings at the SETAC North America meeting in Boston, 13 - 17 November 2011, and at the SETAC World meeting in Berlin, 20 – 24 May 2012. AMEG also participated in other workshops and conferences. The working groups (*Myriophyllum* WG and SSD WG) have continued their activities, whereby the SSD WG finished its tasks. New working groups have been discussed and will be installed. In the text below, par. 2.1 - 2.2 describe the activities of the working groups. Par. 2.3 describes the meetings organized by AMEG and also describes those meetings where AMEG work was presented in the period 2011-2012. Par. 2.4 and 2.5 list future meetings and plans and par 2.6 membership communications.

2.1 Species Sensitivity Distribution Working Group (SSD WG)

On the 13th of Dec 2009 the project of the SSD WG was officially launched by a signed confidentiality agreement agreed by all interested parties. Thirteen stakeholders (academia, contract laboratories, consultancies, industry and research facilities) are involved. The project is funded by 7 companies and the collected data are being examined by an environmental consultant. The aim of the project is to generate a better understanding of the sensitivity of standard test species to herbicides and fungicides using species sensitivity distributions (SSDs) with aquatic macrophytes as a higher tier tool in risk assessments.

The results of the project have been presented in the macrophyte session organized as part of the SETAC North America Annual meeting in Boston and as part of the SETAC World meeting in Berlin. The presentations were titled:

Giddings, J.(Compliance Services International) and the AMEG SSD Working Group: S. Loutseti (DuPont), G. Arts (Alterra), H. Christl (APC), J. Davies (Syngenta), M. Dobbs (Bayer CropScience), M. Hanson (U. Manitoba), U. Hommen (Fraunhofer), J. Honegger (Monsanto), G. Meregalli (Dow AgroSciences), P. Manson (Cheminova), G. Weyman (Makhteshim Agan), 2011. The Relative Sensitivity of Macrophyte and Algal Species to Herbicides and Fungicides: An Analysis Using Species Sensitivity Distributions. Boston, Massachusetts, 13-17 November 2011. – Poster and abstract.

Giddings, J.M. (Compliance Services International). Linking aquatic plant toxicity data for pesticides to risk assessment endpoints and environmental protection goals. Presentation during the SETAC World congress in Berlin, 20 – 24 May 2012. Platform presentation and abstract.

A paper has been submitted to IEAM, in which the main results of the project are described and discussed. The paper is titled:

Giddings, J.M., Arts, G.H.P. and Hommen, U., (IEAM, submitted). The Relative Sensitivity of Macrophyte and Algal Species to Herbicides and Fungicides: An Analysis Using Species Sensitivity Distributions.

With the finalization of the report and paper and the submission of the report to the EFSA, the SSD Working Group finished its tasks. The AMEG SC was very grateful to Stefania Loutseti for chairing this working group and for guiding the process to a successful finalization of the project.

2.2 *Myriophyllum* Working Group (WG)

The *Myriophyllum* working group was established in 2008 to develop a test guideline for a *Myriophyllum* sp. in a water - sediment test system to be used in the pesticide registration

process.. A ring-test has been conducted in several laboratories and the final statistical report will be finalized in November 2012. The protocol is the subject of an OECD Test Guideline Project.

The *Myriophyllum* ring-test approach was presented during the SETAC North America meeting in Boston:

Davies, J., Dohmen, P. & Arts, G.H.P. (2011). A proposed OECD test guideline for the submerged, sediment-rooted macrophyte, *Myriophyllum*. SETAC North America meeting, Boston, Massachusetts, 13 - 17 November 2011. Poster and abstract.

The results of *Myriophyllum* ring-tests were discussed during the AMEG open meeting in Berlin, 20 – 24 May 2012 (for details see par. 2.4).

The leadership of the *Myriophyllum* WG changed from Peter Dohmen to Jo Davies and Margit Dollinger. The AMEG SC was very grateful to Peter Dohmen for chairing this working group from January 2008 until August 2012.

2.3 Meetings and presentations:

- AMEG was presented on the International Symposium on Aquatic Plants, 27-31 August 2012, Poznań, Poland (<http://www.aquaticplants2012.pl/>) by Silvia Mohr. She presented a poster about AMEG and its activities. As most attendants of this symposium were taxonomists and ecologists, this was a very good opportunity to meet colleague macrophyte experts from SIL (International Society of Limnology, Working Group on Aquatic Macrophytes) and EWRS (European Weed Research Society). We will try to build on these contacts for the organisation of future sessions in general and for the session in Glasgow in 2013 in particular.
- AMEG organized a macrophyte session during the SETAC North America Annual meeting in Boston, Massachusetts, 13 - 17 November 2011. In the end it was merged into a new session named *Navigating Environmental Challenges: Historical Lessons Guiding Future Directions*. Several posters related to macrophyte ecotoxicology and risk assessment were presented.
- During the SETAC North America Annual meeting in Boston, 13-17 November 2011 AMEG organized an AG meeting for all AG members and interested participants of the SETAC conference. This meeting included an update of AMEG activities to the audience, a presentation about marine plant ecotoxicology and discussions.
- AMEG organized a platform and poster session during the SETAC World meeting in Berlin, 22 May 2012. Ca. 40 abstracts were submitted to this session dedicated to “Plants and chemicals in the environment”. A summary of this session has been published in the GLOBE: Plants and chemicals in the environment. Risk assessment, pest management and phytoremediation. Session brief of the presentations and

discussions during the SETAC World Congress in Berlin. Gertie Arts, Silvia Mohr and Udo Hommen (<http://ww2.setac.org/globe/2012/september/berlin-brief.htm>).

- AMEG organized an Advisory Group open meeting during the SETAC World meeting in Berlin, 23 May 2012. The AMEG open meeting was organized around a short workshop focusing on rooted macrophyte bioassay protocols and ring-test results. A report of this open meeting was circulated among all AMEG members: Summarizing minutes of the AMEG open meeting May 23, 2012 in Berlin. Margit Dollinger.

2.4 Business and Planning Meetings / New Working Groups

- During the SETAC Annual meeting in Glasgow, 12 – 16 May 2013, a session will be organized on the topic of “Aquatic and terrestrial plant ecology, ecotoxicology and risk assessment”. AMEG’s intention is to organize this session broader than ecotoxicology and risk assessment only and to include ecology and invasive species research as well.
- AMEG will also organize an open meeting of the Advisory Group in Glasgow, 12 – 16 May 2013. The topic of this open meeting and the invited speakers will be decided on later.
- In response to potential EU requirements for tests with additional monocotyledonous species for grass herbicides, a *Glyceria* work group has recently been founded with the objective of developing and ring-testing an appropriate test protocol. The group will formally start working on refinement of an existing protocol and organizing a ring-test in 2013.
- Currently, other new Working Groups are in discussion.

2.5 Future Plans

- AMEG-sponsored short course on macrophyte risk assessment and ecotoxicology;
- Involve other GU (ongoing);
- Initiate new working groups e.g. on topics such as pest management, phytoremediation, global regulations, marine plants, retrospective risk assessments;
- Enhance student involvement;
- Identify other research/data interpretation needs from the environmental management and research communities;
- Outreach to other societies involved in macrophyte research, e.g., ecology, biocontrol, remediation, wastewater treatment.

2.6 Membership Communications.

- Membership communications are organized by regular circulating an AMEG Newsletter and by regular SC and AG meetings during the annual SETAC conferences in Europe and North America

- Several times a year, AMEG circulates a newsletter to their members via the SETAC website to announce new developments and upcoming SETAC meetings where AMEG will organize discussions and sessions.
- Also the new SETAC website gives very good opportunities for communication to members.

Number of active members: 30 as a rough estimate (Steering Committee and Two Working Groups)

Total membership: officially 125 (via the new SETAC Website, October 2012). But actual number is probably larger as not all members have currently re-registered on the new SETAC website.