

**Division VI - Chemistry and the Environment (DCE)
Annual Meeting
Berlin, Germany, 25-26 May 2012
Draft Minutes**



May 25, 2012

1. Opening, welcome, call by name of members attending, apologies

Titular, Associate and National Representative Members Present:

Dr Laura McConnell (LM)- Division President and meeting chair

Prof Nicola Senesi (NS)-Past President

Dr Prof Nadia Kandile (NK), Prof Hemda Garelick (HG); Prof Petr Fedotov (PF); Prof Sirpa Herve (SH); Prof Leo Klasinc; Prof Manos Dassenakis; Prof Ewa Cukrowska (EC); Prof Paul H. Wine (PW); Dr Werner Koerdel (WK); Prof Phillipe Garrigues (PG); Prof Maria Jose Gonzales Carlos (MG); Prof Jiang Guibin (JG); Dr Von Christoph Holst (CV);

Division Members Present:

Dr Heinz Rüdell (HR); Dr Bradley Miller (BM); Dr Yehuda Shevah (YS)

Guests:

René Deplanque (Secretary General, IUPAC)

Apologies:

Prof Willie Peijnenburg (WP); Dr Kenneth D. Racke; Dr Rai Kookana; Prof Supa Hannongbua; Baoshan Xing; Prof Michael Goodsite; Dr. Sukumar Devotta; Dr Soon Ting-Kueh; Prof. Nelly Mañay

The meeting was called to order at 8:30AM and introductions were made by attendees. The agenda was approved as provided.

2. Introductory Presentation from the President

- Overview of Status of IUPAC, Recent activities in our Division with brief description of other Divisions – review of IUPAC Strategic Goals (**Appendix 1**)
- Overview of current and recent projects since 2000 (**Appendix 2**)
- Explanation of Strategic Planning Process – Make the case that we need to come up with a new approach.

3. Strategic Planning Session

- Future State - Where do we want to be in three years? Group brainstormed a list of potential ideas. (**Appendix 3**). Group drafted a Vision Statement that reflects the desired future state.

- Goals – Group brainstormed a number of potential activities to stick on the wall. The ideas were grouped together with the help of BM to come up with wording for 2 to 3 goals for the next 3 years.
- First Draft of revised mission statement to reflect the new vision and goals
- Develop Actions for Each Goal – what must be done to achieve the goals? Group broke into three groups to come up with actions and implementation plan. Teams reported back to the group (**See Appendix 4 for New Draft Strategic Plan and List of actions**). The group decided to develop two high profile call for proposals to form critical review teams on topics related to nanotechnology and also bioavailability. They also agreed to focus on the development of alliances with other societies and potential an environmental chemistry journal. PG, editor and chief of *Environmental Science and Pollution Research* has offered to allow the Division to use the front section of the journal to promote their activities and welcomes the submission of critical reviews based on sponsored projects.

4. Report from René Deplanque (RD) – IUPAC Bureau Secretary General.

RD spoke regarding the need to more effectively brand the work of IUPAC to the benefit of the society. His goal is to address problems of shrinking revenues by developing a supporting organization that works in parallel with the scientific work of the divisions and committees. He has been negotiating with publishing houses to turn Chemistry International into a potential source of revenues rather than a drain. He also mentioned that Pure and Applied Chemistry will ultimately be split into possibly three separate journals:

- IUPAC Journal on Chemistry Conferences
- IUPAC Journal on Standards and Nomenclature
- IUPAC Journal on Chemical research

This is likely to happen over the next 2-3 years. He is available to help our division develop book contracts and to even launch our own journal if we are interested.

May 26, 2012

5. An Overview of proposal review process was provided by LLM

- Before the proposal go out, LM reviews them with the project leaders
- They then go to outside reviewers and to the division committee
- HR commented about the very critical outside reviews that were received regarding his proposal appearing to stem from the idea that the work would entail research. He questioned if reviewers understand what the projects aims are. Suggested better guidelines for reviewers.

Action LM: To enquire with Fabienne Meyer about the information sent to reviewers

6. Project proposal presentation and evaluation

LM presented the list, feedback and ranking of the project proposals that were received by the Division by the submission deadline of April 15, 2012.

A Discussion has taken place on the ranking and the evaluation of the project LM summarized the reviewers comments and ranking for the following

2012-020-3	Kookana	Guiding principles to facilitate a harmonized ecological risk assessment framework for nano-pesticides in the environment
2012-019-1	Unsworth	The Importance of Chemistry in Maintaining a Secure Food Supply
2012-017-1	Dallos	4th Latin American Pesticide Residue Workshop Food And Environment (LAPRW 2013)

2012-012-1	Kleter	Inventory of regulatory safety requirements for genetically modified biopesticides and potential needs for international harmonization
2012-013-1	Kleter	Indirect effects of transgenic crops through their impact on integrated and other pest and weed management practices

These were discussed:

NS commented that the proposals that have been received this year include many of the same groups of people that have been received before. He suggested that while the work done by this group is of high quality, he suggested that the division should try and promote proposals from others. LM indicated that the Crop Protection SC has been extremely productive because the members are experienced in conducting IUPAC projects and SC members are free to join into several different projects therefore leading to many of the same people listed on different proposals.

Discussion has taken place about the Kleter proposals where in some members' view did not contain chemistry. An opposing view was also expressed proposing that one should look at it as Biochemistry environmental projects.

The decision on the projects were as follows:

- Kookana: Strongly supported to provide \$5000 directly with the view of further support later on (the second workshop is planned for the next biennium in 2014)
- Unsworth: Strongly supported - Agreement to support fully- \$1000
- Dallos: Also strongly supported - To support fully with \$5000
- Kleter 012 project was not accepted for funding. However, the project proposal is interesting and well written. However it was proposed that LM will contact Kleter and suggest that the proposal be resubmitted to clearly provide details on the chemical aspects of the project.
- Kleter 013 project was not accepted by the division for funding since it appears there is significant overlap with the previous project by Kleter.

Action LM and WP – Compile review comments from division members and outside reviewers and write letters to each project leader regarding the decisions of the division

LM, PW and BM proposed that with the review call information is sent to reviewers about the number of project that members of the projects teams have proposed, have had financed and have completed.

7. New Proposal Presented

LK has presented the rationale and preliminary data for his proposed project that was developed from an Environmental Compartments Subcommittee meeting discussion in Puerto Rico. A proposal has been submitted to Fabienne and will be distributed to external reviewers and to the division members for review.

2012-028-1	Klasinc	Bibliometric analysis of research on secondary organic aerosols (SOA) in atmospheric and environmental journals
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The budget requested was \$4000 to enable the task group member (Yuanhang Zhang) to participate in the Istanbul congress and present the work and to provide partial travel support for LK. The work was well received and PW was invited to join the task group.

The Division has agreed to move forward with the review and to provide a decision quickly on funding via email.

LM also informed the division a new proposal has been received from Ron Parker that will soon be distributed for review.

8. Proposal for Symposia for the IUPAC Congress in Istanbul

The relevant Istanbul session was presented to the Division i.e. 'Environmental Chemistry, Green and Sustainable Chemistry'

Convenors: Ismail Kirbaslar, Pietro Tundo

The relevant topic was highlighted

- Greenhouse Gases and Carbon dioxide Sequestering
- Sensors Networks in Environmental Systems
- Chemistry in Climate Change
- **Analytical and Risk Considerations for Nanomaterials and Emerging Environmental Issues**
- Water, Air, and Soil Pollutions and Remediation
- Wastewater Engineering
- Beyond chlorine chemistry
- Carbon dioxide utilization in organic synthesis
- Clean products
- Clean reagents and products
- Materials for eco-friendly buildings
- Natural energy materials
- New class of compounds for clean energy
- New reaction pathways for organic synthesis

After a brainstorming session, three symposia were proposed by the division

1. Analytical and Risk Considerations for Nanomaterials and Emerging Environmental Contaminants – Hemda Garelick (Middlesex Univ., UK), Nadia Kandile (Ain Shams University, Egypt), and Phillipe Garrigues (Université de Bordeaux I, France) and Turkish Co-Chair. NK will contact the Turkish Co-Chair

Action NK

2. Marine Pollution and Management of Marine-Industrial Areas (Title tentative) - Manos Dassenakis (Univ. of Athens) and Turkish Co-Chair. MD will contact the Turkish Co-Chair

Action MD

3. Bioavailability of Metals, Metalloids and Organic Contaminants in the Environment – Willie Peijnenburg, Bradley Miller, and Turkish Co-Chair
BM will try and raise finance from Industry for this symposium

Action BM

Action LM – Renew contact with Istanbul Congress organizers to see if three symposia can be accommodated.

Agreed Budget summary

purpose	Sum in \$	Remaining
Current Divisional Budget	48000	
Kookana project proposal	5000	
Unsworth project proposal	1000	
Dallos project proposal	5000	
Klasnic project proposal	4000	33000
High profile project reserve	20000	13000
Istanbul symposium 1	4000	
Istanbul symposium 2	4000	
Istanbul symposium 3	4000	1000

Division agreed to tentatively allocate \$4000 per symposia. This may be adjusted if resources are provided by the Congress organizers or if sponsorships can be obtained from other sources. Any

remaining funds will be used to fund new proposals and additional funds may be sought from the project committee for excellent proposals received.

9. *Nominating committee*

LM reported on the coming Divisional election for the next Biennium. There will be a number of TM positions as well as the Vice President and the Secretary positions.

NS has agreed to chair the Nominating Committee and has explained the process of election. Ken Racke has also agreed to serve on the committee.

1. Soliciting nominations from National adhering Organisations, Individuals and Divisional bodies.
2. Inviting external member for the nominating committees
3. Short listing applications
4. Election

10. *Divisional Alliance with the peer-reviewed journal 'Environmental Science and Pollution Research (editor-in-Chief:Dr Phillipe Garrigues)*

A discussion took place on the initiation on the possible association between the Division and the journal.

PG presented the journal and its audience. It is associated with EuCheMS. It has 2.8 citation index. Rejection rate 70%

<http://www.springer.com/environment/journal/11356>

The EuCheMS Division of Chemistry and the Environment has used this journal also for promoting their activities. Note tab on home page of the journal. This arrangement could also be achieved for Division VI.

NS raised concern about the official relationship with the journal and inquired about what will be the practical arrangement.

PW inquired about the type of publication, and PG clarified that the journal accepts both review and research papers.

LM suggested that it would be an outlet for the Divisional advertising for projects and activities and for increase Divisional visibility.

Decision: The relationship was agreed in principle.

Action LM: LM will email the proposal to the division and will communicate with the leadership of IUPAC to ensure the process is transparent.

11. *Vision statement*

A lengthy discussion has taken place on the inclusion on the word 'food' in the vision statement. Some members have indicated that "food" is already included in the Chemistry for the Environment' expression. Others want to see more explicit reference to 'food'.

3 options of the vision statement were reviewed

- *The Division is recognised as a leading organization on authoritative critical reviews, interactive workshops, and outreach to the scientific community and the public on emerging topics on chemistry and the environment.*
- *The Division is recognised as a leading organization on authoritative critical reviews, interactive workshops, and outreach to the scientific community and the public on emerging topics in environmental chemistry.*

- ***The Division is recognised as a leading organization on authoritative critical reviews, interactive workshops, and outreach to the scientific community and the public on emerging topics in environmental and food chemistry.***

A vote was taken and after 2 close rounds the majority vote was assigned to option 3 (in bold)

12. Subcommittee and project meetings

2 parallel meetings have taken place:

1. Food Chemistry meeting : LM and CV

The discussion was on possible revival of food chemistry in IUPAC.

It was agreed to

- Investigate interactions with the AOCS Interagency Meeting group. How would you like to proceed? Would you like me to email someone as Division President? Or do you want to initiate contact with them?
 - LM will contact Kevin Armbrust who may be involved in that particular group?
- Investigate interactions with CODEX. Ken Racke has some contacts in this realm,
- Investigate interaction with the North American Pesticide Residue Workshop group. LM can contact Steve Lehotay on this.

Actions CV and LM – Will follow up via email on above items.

2. Sub-committee of Chemistry of Environmental Compartments

The meeting was inclusive with members of 'Subcommittee on Biophysico-Chemical Processes in Environmental Systems'

A discussion took place whether the two sub-committees should merge. Various views were expressed. NS suggested that this need to be discussed between the members of the 'Subcommittee on Biophysico-Chemical Processes in Environmental Systems' first and then a decision can be made.

Action NS and PF: To consult the members of the subcommittee

Members of Sub-committee of Chemistry of Environmental Compartments presented updates on their projects

- Shevah: 2008-003-3-600- Regional Drinking Water Quality Assessment in the Near East (Palestinian Authority, Jordan, and Israel) An Overview and Perspective. Detailed project report has been submitted (**Appendix 5**)
Action YS – Email LM with regards to requirements on publishing in PAC
- Kordel: 2009-048-1-600: Guidance for substance-related environmental monitoring strategies regarding soil and surface water*.
Action WK - This review paper will be submitted to *Environmental Science and Pollution Research* as part of new alliance with the journal.
- Dassenakis: 2006-049-2-600: Combination of chemical analytical measurements and remote sensing techniques for coastal water monitoring. The cases of Eastern Mediterranean and Black Sea.
- Ruedel: 2012-002-1-600- Appropriate consideration of bioavailability of metals/metal compounds in the aquatic environment. Project just underway.
- Klasinc: 2012-028-1- Bibliometric analysis of research on secondary organic aerosols (SOA) in atmospheric and environmental journals. Project underway to be presented in Istanbul.

A discussion on future projects has taken place: Suggestions included advertising for calls for high profile critical review projects in '*Environmental Science and Pollution Research*':

Nanoparticles -

Action: Leader of Nanomaterials team will develop a call
Bioavailability

Action: HR, BM, WK will develop call for proposals
Atmospheric deposition of air pollutants to drinking water sources.
Action: YS, LK will consider developing a proposal on this topic

Breakout groups reported back to the larger group.

A divisional conference call is planned for the end of 2012 or early 2013. The next face to face meeting will be at the Istanbul GA in 2013. HG has tentatively offered to host the division In 2014 in London.

Divisional meeting was closed at 3PM

Minutes submitted by Hemda Garelick, Associate Member Division VI

Appendix

Appendix 1

List of current and recent division-sponsored projects since 2000

Appendix 2

Result of brainstorming session - List of potential ideas for activities and scientific topics that could be initiated by the division

Appendix 3

New Draft Strategic Plan and List of actions associated with new goals

Appendix 4

On-going project and subcommittee reports received

Appendix 1 - Division VI Projects Since 2000

2000-016-1-600:	Environmental implications of endocrine active substances: Present state-of-the-art and future research needs	Double Issue of <i>Pure and Applied Chemistry</i>
2001-022-1-600:	Global availability of information on agrochemicals	Active Website http://agrochemicals.iupac.org/ linked to Footprint Pesticide Properties Database
2001-023-1-600:	Agrochemical spray drift: Assessment and mitigation	Journal of Environmental Science and Health Part B (2010) 45 889-911. (doi:10.1080/03601234.2010.515161)
2001-024-2-600:	Impact of transgenic crops on the use of agrochemicals and the environment	"Altered Pesticide Use on TransgenicCrops and the Associated General Impact from an Environmental Perspective", <i>Pest Manag. Sci.</i> 2007, 63(11), 1107-1115;doi:10.1002/ps.1448] And 5 Conference Proceedings
2001-026-1-600:	Use of reference soils for testing fate and effects of chemicals	W. Kördel et al, <i>Trends in analytical Chemistry</i> , volume 28, Issue 1, January 2009, Pages 51-63 [doi:10.1016/j.trac.2008.07.007]
2001-039-1-600:	Pest management for small-acreage crops: a cooperative global approach	Project was abandoned
2002-011-2-600:	Fats, Oils and Oilseeds Analysis and Production - an International Workshop on	Workshop: Sheraton Hotel, Tunis, Tunisia, 6-8 December 2004. Details are available on < www.aocs.org/archives/analysis >
2002-013-2-600:	Determination of trace elements in oils and fats by inductively coupled plasma optical emission spectroscopy (ICP-OES) - evaluation of a method by collaborative study	Project was abandoned
2002-046-1-600:	Pesticides: Harmonization of data requirements and evaluation. An IUPAC-Korean Society of Pesticide Science (KSPS) Workshop, Seoul, Korea, 13-16 October 2003	More than 300 scientists, government regulators, and industry leaders representing 28 countries gathered in Seoul, Korea during October 13 to 15 to participate in the IUPAC-KSPS International Workshop on Pesticides 2003.
2003-011-3-600:	A critical compendium of pesticide physical chemistry data	The outcome of the projects is a web page (http://agrochemicals.iupac.org) that consists of several pages of information under headings Agrochemicals, Information, Regulations, Residues, Risk Assessment and Trade Associations.
2003-013-1-600:	Crop protection chemistry in Latin America: Harmonized approaches for environmental assessment and regulation	Conference report - see <i>Chem. Int.</i> Jul-Aug 2005. A feature article on the Advancement of Harmonized Approaches for Crop Protection Chemistry in Latin America, authored by K. Racke, E. Caraza, and G. Roberts has been published in the Sep-Oct 2005 CI. Spanish Translation of Pesticides in the Environment completed
2003-014-2-600:	Fractal structures and processes in the environment (revised)	October 2008: project completed Book published by Wiley 2008, ISBN: 978-0-470-01474-5
2003-017-2-600:	Remediation technologies for the removal of arsenic from water and wastewater	Final project output published in a special issue of <i>Reviews in Environmental Contamination and Toxicology</i> . Garelick H and Jones H (editors) (2008). <i>Remediation technologies for the removal of arsenic from water and wastewater</i> . <i>Reviews in Environmental Contamination and Toxicology</i> . Vol 197. Springer. New York, Heidelberg [doi 10.1007/978-0-387-79284-2] book announcement published in <i>Chem. Int.</i> 31(4), 2009
2003-030-1-600:	Glossary of atmospheric chemistry	Project was abandoned

2003-058-1-600:	Air pollution models in environmental management and assessment	Project was abandoned
2004-002-1-600:	Glossary of terms related to pesticides	Project completed - IUPAC Recommendations published in Pure Appl. Chem. 78(11), 2075-2154, 2006.
2004-003-3-600:	Biophysico-chemical processes of heavy metals and metalloids in soil environments	Project completed - book titled "Biophysico-Chemical Processes of Heavy Metals and Metalloids in Soil Environments" published by John Wiley & Sons, 2007 [ISBN 978-0-471-73778-0].
2004-011-1-600:	Development of simplified methods and tools for ecological risk assessment of pesticides	initial part of this project is completed; see continuation as project 2008-011-2-600
2004-015-1-600:	Environmental colloids: behavior, structure and characterization	project completed Book published by Wiley 2007, ISBN 0-470-02432-1
2004-017-1-500:	Standardization of analytical approaches and analytical capacity-building in Africa	Project completed - We plan to request for further funding to assist this laboratory in the following remedial measures outlined in our original proposal and requested by UNBS e.g. analytical standards, approved analytical kits, training in special areas needed to comply with regulations, etc. This IOCD program will continue under the leadership of another IUPAC/IOCD member, Dr. Jack Plimmer.
2005-024-2-600:	Establishment of guidelines for the validation of qualitative and semi-quantitative (screening) methods by collaborative trial: a harmonized protocol	Close to Completion: A full text of the study is being finalised; this report will trigger discussions/comments that will allow to fine tune the validation protocol that is to appear in Pure and Applied Chemistry and an article will be submitted to Chemistry International.
2006-011-1-600:	Critical review of available methods to predict VOC emission potentials for pesticide formulations	Project completed - a report has been published in Atmospheric Environment 45 (2011) 2404-2412 [doi:10.1016/j.atmosenv.2011.02.015]
2006-014-1-600:	Biophysico-chemical processes involving natural nonliving organic matter in environmental systems	Project completed - book titled "Biophysico-Chemical Processes Involving Natural Nonliving Organic Matter in Environmental Systems" published by John Wiley & Sons, 2009 [ISBN 978-0-470-41300-5].
2006-015-3-600:	Evaluation of food and feed safety implications of (altered) residues of pesticides applied on transgenic (GM) crops	Project ongoing. Paper published by Pest Management Science: Kleter, G.A., Unsworth, J.B. and Harris C.A.(2011) The impact of altered herbicide residues in transgenic herbicide-resistant crops on standard setting for herbicide residues, Pest Management Science 67 1193 – 1210. See also Kleter, G.A., Unsworth, J.B. and Harris C.A. (2012) Genetically modified, herbicide-resistant crops, New Food Magazine 15 19-22.
2006-017-2-600:	Crop Protection Chemistry in Asia: Harmonized Approaches for Safety Evaluation, Regulation, and Protection of Trade	Project completed - The 7th International Workshop on Crop Protection Chemistry and Regulatory Harmonization took place Beijing, China on 9-13 October 2007.
2006-039-2-600:	Extraction and fractionation methods for exposure assessment related to trace metals, metalloids and hazardous organic compounds in terrestrial environments	Project completed: Fedotov et al. Critical Reviews in Environmental Science and Technology; Nov 2011 http://dx.doi.org/10.1080/10643389.2011.55654
2006-044-2-600:	Environmental Risk Assessments for the Registration of Pesticides used in Rice Paddy Fields	Project ongoing. Task group meeting and symposium held Oct-2007. Task group meetings held in 2009 and 2011. Draft report has been prepared, with finalization scheduled for September 2012.
2006-049-2-600:	Combination of chemical analytical measurements and remote sensing techniques for coastal water monitoring. The cases of Eastern Mediterranean and Black Sea	Project completed - Technical Report available as Pure Appl. Chem., ASAP article http://dx.doi.org/10.1351/PAC-REP-11-01-11, published online 2011-12-22, ; Pure Appl. Chem., 2012, Vol. 84, No. 2, pp. 335-375

2007-017-1-600:	What are dietary fibres?	Project was abandoned
2007-026-2-600:	Soils contaminated with explosives – Environmental risk assessment and evaluation of state-of-the-art treatment processes	Project Completed - published in Pure Appl. Chem., 2011, Vol. 83, No. 7, pp. 1407-1484; doi:10.1351/PAC-REP-10-01-05, published online 2011-05-07
2007-057-1-600:	Crop protection chemistry in Latin America: Environment, safety, and regulation (3rd International Workshop*)	Project completed - The workshop took place in Rio de Janeiro, Brazil, on 9-12 November 2009. September 2010 - workshop report published in Chem. Int. Sep-Oct, pp. 26-30
2008-003-3-600	Regional Drinking Water Quality Assessment in the Near East (Palestinian Authority, Jordan, and Israel) An Overview and Perspective	Project On-Going - The Environment Workshop and the IUPAC Project Session were held as part of the Malta Conferences Foundation which took place at UNESCO HQ in Paris, France between Dec 4 and 9, 2011. Presentation of the project at IUPAC World Chemistry Congress, Puerto Rico, 30/7 - 7/8, 2011. Presentation of the project at the 9th "EUROPE-INTERNATIONAL NETWORK OF BASIN ORGANIZATIONS (INBO) 2011" international conference and General Assembly of the Mediterranean Network of Basin Organizations (MENBO), OPORTO (PORTUGAL), 27 - 30 SEPTEMBER 2011. Circulation of the Draft Final Report to the Working Group members, September 3, 2011). Working Group meeting and discussion at UNESCO, Paris, December 4-9, 2011. Finalization of the Project Final Report, in progress. Preparation for the Final workshop (initial steps). Initiation of downstream projects attracting additional funding (initial steps). An Article for publication in Chemistry Int. Submitted January, 28, 2012. A Chapter to be published in a book entitled "Comprehensive Water Quality and Purification" Elsevier, 2012
2008-001-1-600:	Biophysico-Chemical Processes of Anthropogenic Organic Compounds in Environmental Systems	Project completed; book published by Wiley, ISBN: 978-0-470-53963-7, May 2011
2008-011-2-600:	Development of a Pesticide Ecological Risk Assessment and Training Module	Continuation of earlier project (2004-011-1) to advance a training initiative with national regulatory authorities for the IUPAC project-related materials that have been developed. Project ongoing. Detailed progress report received.
2008-041-1-600:	Global Availability of Information on Agrochemicals	Projected completed. Continuation of earlier project (2001-022-1) to provide for website maintenance and expansion. The website is up and running (http://pesticides.iupac.org) some problems were experienced with attacks on the website but these have been overcome. It is now necessary to maintain and add to the website in order to keep it up to date.
2009-010-3-500:	Harmonized Protocol for the Proficiency Testing of sampling of environmental matrices	Division V is the Lead on this Project
2009-048-1-600:	Guidance for substance-related environmental monitoring strategies regarding soil and surface water	Project almost completed. Paper to be submitted to Environmental Science and Pollution Research
2010-018-2-600:	Quantitative Review and Analysis of Pesticide Sorption and Its Effect on Degradation in Relation to Soil and Climate	Initialized Jan 2011 – Project ongoing. This project evolved from Quantitative Review of Pesticide Environmental Fate Parameters and (2010-018-1-600) following comments from the DCE. Task group has been formed, first task group meeting held in August 2011.
2010-028-3-600:	Management of maritime pollutants in shipping and commercial European ports based on relevant physical and biogeochemical environmental parameter	Initialized Sept 2011 – Need to follow up on progress with task group chairman

2010-056-1-600:	<u>Global Framework for Implementing Consistent Ecological Risk Assessment of Pesticides for Sustainable Agriculture</u>	Initialized Sept 2011 – A telephone conference was held in March 2011 and a task group meeting was held in August 2011. Four chapters of documentation have been prepared. Planning is underway for a workshop to be held in Beijing on September 16-17.
2010-060-1-600:	<u>Maintaining and Ensuring the Pesticides Properties Database (PPDB)</u>	Initialized Sept 2011 – Task group members identified.
2011-019-1-600:	<u>Engineered Nanoparticles and the Environment: Physicochemical Processes and Biototoxicity</u>	Initialized October 2011
2011-023-2-600:	<u>Critical review of approaches to dietary risk assessment for pesticide</u>	Initialized January 2012 – Task group members identified.
2011-042-1-022:	<u>Materials For A Sustainable Future</u>	Initialized January 2012 – Progress report?
2011-061-1-600:	<u>Advancement in Product Development, Safety Evaluation and Risk-Based Regulation of Crop Protection Chemistry in the Asian Pacific region</u>	Workshop planned for September 2012, Beijing China
2012-002-1-600	Appropriate consideration of bioavailability of metals/metal compounds in the aquatic environment	Initialized January 2012 – Review comments relayed to Project task chair.

Appendix 2 -

- Appropriate Sustainability of Food Safety, Environment, Natural Resources, Work with other Divisions
- Environmental Remediation Technology
- Environmental Criteria for Water
- Emerging Contaminants – Nanoparticles in the environment – Big unknowns regarding fate in the environment, no proper toxicity assessment tools, hybrid organic/inorganic materials
- Promote the study of the use of natural nanomaterials to limit the use of manufactured materials
- Ecosystem services from natural nanomaterials
- Reuse of waste materials in a fashion that would allow for sustainable use into the future
- Concerns regarding the reuse of municipal wastes (associated nanomaterials)
- Critical assessment and universal tools Bioavailability, bioaccessibility, bioreactivity, of nanomaterials and other environmental pollutants
- How environmental monitoring can be used support risk assessment – Persistent, Bioaccumulative, and Toxic
- Chemicals and biochemical passive sampling techniques
- Development (Standardization), Validation, and Application of Predictive Models of Bioavailability, bioaccessibility, bioreactivity
- Synergistic “cocktail” effect of multiple pollutants in the environment
- Fate of pharmaceuticals in the environment
- Fate of artificial sweeteners in the environment
- Procedures for Better availability of environmental data bases –
- Global climate change
- Guidance of best practices and priorities for environmental monitoring
- Indoor air quality problems from burning
- On-line webinars – directly to interested stakeholder groups
- Interactions with African scientists – because very little interaction
- Liasons with other Societies - EuCheMS, SETAC, Ecological Society of America, Soil Science Society of America,
- Division workshop on global issues of Water
- Investigate potential awards that could be sponsored
- Try to focus work on interacting with regulatory and industry science communities and NGOs – promote harmonization
- Participate in Research Gate – or other social media to interact with other scientists especially young scientists

Appendix 3
IUPAC Division of Chemistry and the Environment
Draft Strategic Plan 2012-2015

Revised Mission Statement

The IUPAC Division of Chemistry and the Environment (DCE) is recognised as a leading organization on authoritative critical reviews, interactive workshops, and outreach to the scientific community and the public on emerging topics in environmental and food chemistry.

Goals:

1. The DCE will provide leadership in the scientific community by facilitating the formation of internationally-recognized teams to carry out critical reviews on emerging environmental chemistry topics.
2. The DCE will enhance the visibility and impact of its activities by forging alliances with other professional organizations and seeking new approaches to more effectively disseminate project outcomes

Approach:

Goal 1a Activities:

At the divisional level, solicit an international team to conduct a critical review or state of the art survey on environmental chemistry aspects of products, uses, emissions, toxicological testing of nanomaterials.

The US EPA White Paper on Nanotechnology and other relevant resources could be used as a resource to refine the call for proposals (<http://www.epa.gov/osa/nanotech.htm>). The call would be finalized by the end of July and advertised in as many outlets as possible including *Environmental Science and Pollution Research*. The decision on the selected team would be provided by January 2012. The project team selected would be given a timeframe of 18 months to complete the project so that a workshop in 2014 could be targeted.

A budget of 10K would be contributed by the DCE. Team will investigate potential partnerships with COCI and CCE, Organic and Biomolecular Chemistry Division (Green Chemistry Subcommittee), and Analytical Chemistry Division. Team will also investigate the possibility of Project Committee funding. Project could be highlighted as part of the Persistent Toxic Substances Conference Series (Jiang – key person).

Goal 1a Team Members:

Nadia Kandile
Guibin Jiang
Nicola Senesi
Hemda Garelick
Heinz Rüdell
Laura McConnell

Action LM: Open up to all division members and select leader.

Goal 1b Activities: Bioavailability

Team Leader: Petr Fedotov
Team Members: Werner Kordel, Bradley Miller
Call for projects (first draft)

The project proposals related to different aspects of bioaccessibility and bioavailability are welcome. Terms “bioaccessibility” and “bioavailability” currently used in biology, biochemistry, ecotoxicology and environmental sciences are needed to be discussed and critically evaluated. Besides, different approaches and methods applied to measuring bioaccessibility and bioavailability require comparative study, classification, and generalization.

Note

In the recently completed project of the Division* it is demonstrated that similar methodologies are applicable to the exposure assessment of inorganic and organic pollutants in contaminated and native soils/sediments of different type and origin. A special emphasis is given to the correlation between the results of chemical extraction/fractionation and the data on the biouptake of trace metals, metalloids, and hazardous organic compounds by plants and soil organisms. Application of extraction techniques to the assessment of potentially biodegradable fractions of organic pollutants is also discussed and evaluated. Recent developments in dynamic extraction methods, which mimic natural scenarios more correctly than the batchwise counterparts, are presented in detail.

* Petr S. Fedotov, Werner Kördel, Manuel Miró, Willie J.G.M. Peijnenburg, Rainer Wennrich, Pan-Ming Huang. *Extraction and Fractionation Methods for Exposure Assessment of Trace Metals, Metalloids, and Hazardous Organic Compounds in Terrestrial Environments*. *Critical Reviews in Environmental Science and Technology*, 42:1117–1171 (2012)

It is emphasized in the review that for practical reasons a differentiation between environmental availability, environmental bioavailability, and toxicological bioavailability is made in ISO 17402. Environmental availability is often defined as the concentration of a chemical in pore water. This includes not only the fraction dissolved as free molecules/ions but also the fraction of dissolved complexes. Environmental bioavailability considers the processes in the bioinfluenced zone (e.g., substance uptake by plants can be modified by root exudates). Further factors are exposure routes and feeding behavior of organisms. Toxicological bioavailability includes internal processes in the organisms such as uptake, distribution, metabolism, excretion, and accumulation. Environmental availability includes (a) an actual available fraction and (b) a potentially available fraction, which is the maximum amount that can be released under predefined worst-case conditions or – regarding degradation processes – released over a certain time period.

Other definitions are also used in literature. Environmental availability is also referred to bioaccessibility, as introduced by Semple et al. (2004) to clarify which part of the soil/organism system was investigated. The authors also proposed to distinguish clearly between bioavailability and bioaccessibility. They defined bioavailable compound as that fraction of the compound present that is freely available to cross an organism's cellular membrane from the medium the organism inhabits at a given time. Once transfer across the membrane has occurred, storage, transformation, assimilation, or degradation can take place within the organism. However, these processes are obviously distinct from the transfer between the medium (e.g., soil) into the organism. Semple et al. (2004) defined bioaccessible compound as that which is available to cross an organism's cellular membrane from the environment, if the organism has access to the chemical. Nevertheless, the chemical may be either physically removed from the organism or only bioavailable after a period of time. In this context, physically removed may refer to a chemical that is occluded in soil organic matter or inorganic components and hence is not available at a given time or that occupies a different spatial range of the environment than the organism. To sum up, bioaccessibility encompasses what is actually bioavailable now plus what is potentially bioavailable.

In ecotoxicology, bioavailability is regarded as the potential for uptake of a chemical by a living organism (Nordberg et al., 2007). Bioaccessibility is defined (Nordberg et al., 2007) as the potential for a substance to be exposed to a living organism and perhaps interact with it, with the possibility of absorption into the organism. A substance trapped inside an insoluble particle is not bioaccessible, although substances on the surface of the same particle are bioaccessible and may also be bioavailable. Even substances bound to the surface of particles may not be accessible to organisms that require the substances to be in solution. Bioaccessibility, similar to bioavailability, is a function of chemical speciation and biological properties of substances. Bioaccessibility is a necessary precursor of bioavailability but not, on its own, sufficient for bioavailability to occur.

There are slight differences in the previous given definitions; however, they reflect the similar characteristic features of bioavailability as actual availability and bioaccessibility as potential availability. It should be stressed that

bioavailability depends on specific target organisms; its habitat, feeding, and specific uptake mechanisms; and the properties of contaminants. Therefore, general procedures to mimic/measure bioavailable fractions of pollutants are not possible. Methods that are developed for the assessment of bioaccessible fractions of pollutants should meet the following demands:

- They should clearly state for which set of organisms the method is developed (e.g., bioavailability for earthworms, microorganisms, plants).
- They should clearly state the considered exposure route.
- They should have a mechanistic base – which processes are mimicked by the chemical extraction procedure (e.g., simulation of pore water, the bioinfluenced zone, or uptake in stomach or gut).

There is yet another aspect of bioavailability, chemical activity (Reichenberg and Mayer, 2006) that quantifies the potential for spontaneous physicochemical processes, such as diffusion, sorption, and partitioning. The authors proposed to use chemical activity of the free molecule/ion as a complementary approach to explain the accessible quantity for potential availability (mass of contaminants, which can become available to, for example, biodegradation and biouptake).

Semple, K.T., Doick, K.J., Burauel, P., Craven, A., and Harms, H. (2004). Defining bioavailability and bioaccessibility of contaminated soil and sediment is complicated. *Environ. Sci. Technol.*, 38, 228A–231A.

Nordberg, M., Duffus, J.H., and Templeton, D.M. (2007). Explanatory dictionary of key terms in toxicology (IUPAC Recommendations 2007). *Pure Appl. Chem.*, 79, 1583–1633.

Reichenberg, F., and Mayer, P. (2006). Two complementary sides of bioavailability: Accessibility and chemical activity of organic contaminants in sediments and soils. *Environ. Toxicol. Chem.*, 25, 1239–1245.

Goal 2 Activities:

Develop alliances with Environmental Chemistry and AGRO divisions of American Chemical Society, SETAC North America, SETAC Europe, Soil Science Society of America and EuCheMS through the development of special symposia. Also develop symposia at the Istanbul Congress.

Session speakers would be welcomed to submit chapter/papers for publication in a book or special issue of *Environmental Science and Pollution Research* or other appropriate journal.

Initiate a program of podcasts or webinars of key presentations.

Investigate the use of Research Gate as a way to connect with younger scientific community.

Team Leader: Laura McConnell

Team Members: Bradley Miller, Christoph, von Holst, others invited

Appendix 5 – Progress Reports Received

IUPAC Project Progress Report

Project number: 2005-024-2-600

Task Group Leader: Christoph von Holst

E-mail address: christoph.von-holst@ec.europa.eu

Project Title: Establishment of guidelines for the validation of qualitative and semi-quantitative (screening) methods by collaborative trial: a harmonized protocol

1. Current status of project:

The paper on the qualitative method guidelines has been accepted, just requiring the additional preparation of supplements in electronic formats.

2. Progress relative to 'milestones':

We managed to find an agreement with AOAC, in order to incorporate our concept for the validation guideline into an AOAC initiative via a Working Group for Alternative Methodology (ISPAM). The objective of this working group is to establish guidelines for the same purpose.

The first combined draft is now available on AOAC website with reference to our work

<http://www.aoac.org/ISPAM/new/documents.htm#qualitative%20chemistry>

3. Difficulties encountered (or concerns):

4. Projected completion date (documents ready for external review):

It is realistic to have the guideline finished by end of 2012. However, as mentioned before, the objective is to draft a guideline which takes the concepts from various groups working on the same topic into account

5. Please list all of the intended outputs and the dissemination plan for this project (viz. articles, CD, conference presentations; etc.). These may have been expanded since project approval:

Will develop a separate publication for PAC and Chemistry International

6. If your project is within 6 months of completion, how do you plan to utilise any remaining budget for this project?

7. Work on this project may have identified new problems, issues, challenges, emerging topics, opportunities for related projects, etc. Please indicate these here so that the Division can follow up on them:

IUPAC Project Progress Report

Project number: #2008-011-2-600

Project Title: DEVELOPMENT OF SIMPLIFIED METHODS AND TOOLS FOR ECOLOGICAL RISK ASSESSMENT OF PESTICIDES

Task Group Leader: Ronald D. Parker (parker.ronald@epa.gov)

1. Current status of project:

Project number: #2008-011-2-600, "DEVELOPMENT OF SIMPLIFIED METHODS AND TOOLS FOR ECOLOGICAL RISK ASSESSMENT OF PESTICIDES" is a continuation of project number: #2004-002-1-600 of the same name.

Progress during the past year in the continuation phase of the project:

- The USEPA Office of Pesticides Programs (OPP) has completed peer-review updates of the eEvaluate* ecological risk assessment/risk management training module. Final USEPA approval has been given to place both the English and Spanish versions of eEvaluate on the USEPA website as soon as they are complete. A copy of the final approval letter is attached to the end of this report.
- The HTML coding of the English language version of eEvaluate is mostly complete.
- Funding of the Spanish language translation of the peer-review changes was lost due to delays, but a search for new funding is underway.
- eEvaluate includes the extensive IUPAC pesticide reference material developed by Unsworth, et.al. 2010.

* The pesticide ecological risk assessment and training module was given the name 'eEvaluate' to reflect the evaluative nature of the risk assessment process, to indicate the on-line nature of many of the tools and references used. The name 'eEvaluate' is also ideal for an international module because it is very similar in the languages of many of the other countries in which the module is likely to be used (Spanish, Portuguese, French)

2. Progress relative to 'milestones':

The first complete draft of the this module was completed a contractor (Oak Ridge National Laboratories) in both English and Spanish in 2008 and distributed for peer review.

The User-friendly EXAMS-PRZM Exposure Simulation Shell (EXPRESS) which is recommended in eEvaluate for pesticide aquatic exposure assessment has also received final approval by the USEPA Office of Pesticide Programs and is available on line at:

<http://www.epa.gov/ceampubl/swater/express/>

Presentations of the eEvaluate methodology have been made to IUPAC workshops in Beijing, China; New Delhi, India and Rio de Janeiro, Brazil.

3. Difficulties encountered (or concerns for future):

Aquatic exposure cropping scenarios for the Pesticide Root Zone Model (PRZM) have been developed for the United States and for some other countries in Latin America. Development of standard guidelines for development of additional aquatic exposure modelling scenarios for countries other than the United States is still ongoing.

Funding for Spanish translation of the peer-review changes was lost due to delays in the peer-review process. A search for new funding for this translation from several sources is underway.

IUPAC Progress Report
Project number 2010-056-1-600

Project title Global Framework for Implementing Consistent Ecological Risk Assessment of Pesticides for Sustainable Agriculture

Task Group Chair (TGC): John Unsworth

Number of people involved 19 (Two new members – Prof. J.O. Lalah, Kenya Polytechnic University College, Nairobi, Kenya; and Prof. G.P. Cobb, Baylor University, Waco, Texas, USA– have been added)

Titular Members

Task group approval (date YYYYMMDD) 2011-01-01

Report interval (YYYYMMDD – YYYYMMDD) 2011-2014

Projected completion (YYYYMMDD) 2014-01-01

PROJECT STATUS

Product or outcome - Training materials for environmental risk assessment in scientifically developing nations are being developed.

Milestones - One meeting of Project Team held in August 2011 at San Juan, Puerto Rico.

Four out of eight chapters for the project documentation have been finalized and the remaining four are scheduled to be complete by July.

Final report and training materials (November 2012)

China workshop is now scheduled for September 2012 – originally May 2013.

Brazil workshop scheduled for December 2013

Deliverables/dissemination plan - Two workshops will be developed: one in China and one in Brazil where results of this work will be transferred to workshop participants. Training sessions on the use of e-Valuate will be provided for key attendees. Presentations will also be made at appropriate conferences.

FINANCE

Division allocation 5000 USD

Project Committee allocation --

External grants 10000USD requested from Brazil (IBAMA and Brazilian National Board for Research)

Nanjing Institute of Environmental Sciences, Ministry of Environmental Protection – NIES, China will fund the cost of the Chinese workshop which is scheduled to be held in Beijing in September – estimated 5000USD. Due to financial constraints this will be less than the original 30000USD originally proposed.

Above sums dedicated to planned workshops

Total budget 20000USD

Expenditures 3083 USD

SPIN-OFF

Emerging challenges/topics/opportunities - The proposed workshop in Beijing will go ahead if there is sufficient funding for the presenters involved. The issues dealt with in this project are of significant interest in Africa, however, if the results of the project are to be transferred to the situation in Africa additional funding would be necessary.

IUPAC Progress Report

Project number 2008-041-1-600 (continuation of 2001-022-1-600)

Project title Global Availability of Information on Agrochemicals

Task Group Chair (TGC): John Unsworth

Number of people involved 13

Task group approval (date YYYYMMDD) 2009-03-01

Report interval (YYYYMMDD – YYYYMMDD) 2009-2012

Projected completion (YYYYMMDD) 2012-12-31

PROJECT STATUS

Product or outcome - Web page that is interactive and which can be easily updated – secure “Wiki” approach

Milestones - Putting in place secure document management system, system required to check on number of hits

Progress relative to milestones - The web site has been successfully implemented and contains about 30 separate documents. However, following the “bot” attack (as mentioned in the previous update) the site was disabled and it was not possible to update any of the documents, or to add new information. In addition in March this year the Brazilian National Computer Emergency Response Team and Google reported that the server was hosting phishing pages and the site was shut down. Recently, this problem was rectified and it can now be accessed again. In addition it is now possible to edit the site and over the next few months it will be updated.

Deliverables/dissemination plan Web site and presentations at conferences

FINANCE

Division allocation 5600 USD

Project Committee allocation --

External grants --

Total budget 5600USD

Expenditures 5531USD

Result/Status This project can be considered as complete but if the web site is to remain useful it will require updating on a regular basis

EVALUATION

Publications Journals/Books/Internet Web page is up and running but needs to be updated (see above)

Citations

Workshops/conferences/congresses Presentation made at the 2nd IUPAC Sponsored conference on “Agrochemicals, Protecting Crops, Health and Natural Environment; Role of Chemistry for Sustainable Agriculture”. New Delhi, India, February 2012.

It is also planned to make presentations at the 8th International Workshop on Crop Protection Chemistry and Regulatory Harmonization, Beijing, September 2012 and the IUPAC Pesticide Congress, San Francisco, August 2014

SPIN-OFF

Emerging challenges/topics/opportunities - When this project is complete the web page will need constant updating, which will involve some expenditure

IUPAC Progress Report

Project number - 2006-0015-3-600

Project name - Evaluation of food and feed safety implications of (altered) residues of pesticides applied on transgenic (GM) crops

Scheduled completion date - 31 December 2012

Team leader - G.A. Kleter

- Main developments since previous report, and scheduled activities
- Presentation of the project and its outcomes so far during a plenary lecture at the IUPAC-IARI APCHNE 2012 congress in Delhi, India, February 2012
- Publication of an article on the outcomes of part of the project in the applied journal *New Food* (issue 2, 2012)
- Team meeting to be held in conjunction with Beijing conference in September 2012 (presentation to be given at the conference).
- Manuscript to be prepared on the topic of insect-resistant crops and the regulation and assessment of newly expressed insecticidal proteins in these crops.
- Additional publications (e.g. applied and popular media) and activities to be decided on during the upcoming team meeting.

Past activities/results

- Presentations at IUPAC pesticide congresses (Beijing, 2007; Melbourne, 2010, Puerto Rico, 2011, Delhi, 2012)
- Conference proceedings chapter (Beijing 2007)
- Article in *Pest Management Science* (2011)-



International Union of Pure and Applied Chemistry

A member of the International Council of Scientific Unions

Advisory Committee on Crop Protection Chemistry (VI)

REPORT OF ACTIVITIES

19TH MAY 2012

TERMS OF REFERENCE

Through its internationally recognised membership, the Committee provides unbiased and authoritative views regarding environmental and human health aspects of crop protection chemistry. Through its timely projects, publications, and outreach activities the Committee seeks to advance research understanding and promote environmental stewardship

MEMBERSHIP

The Committee is currently comprised of 28 members from both developed and developing countries. The majority of members are actively involved in one or more ongoing IUPAC projects, and are drawn from government, academia, and industry to ensure that an unbiased balance of perspectives. A copy of the current membership list is appended to this report.

AFFILIATE MEMBERSHIP

There has been growing interest in the Committee and a category of "Affiliate Membership" has been set up. This consists of scientists that are interested in the work of the Committee and wish to be kept up to date on its current activities. Affiliate members have been drawn from both developed and developing countries. They include members from countries not currently represented on the Committee e.g. Russia, South Africa, Kenya, India and Pakistan. There are currently 20 affiliate members and a copy of the list is attached. The brochure prepared previously to give potential members more information about the Committee is attached.

OPERATION

The Committee meets formally every 1 to 2 years, generally in association with an IUPAC-sponsored Congress or regional workshop. Committee meetings are generally conducted as a series of concurrent working sessions of the various project teams usually during a 2 day period. This meeting format facilitates economy of effort and funding by allowing project participants to travel once to contribute for multiple projects. The last full meeting of the Committee occurred during 3-4 August 2011 in San Juan, Puerto Rico. It is hoped that the next full meeting of the Committee will be held during the IUPAC sponsored 4th International Symposium on Pesticide and Environmental Safety & 8th International Workshop on Crop Protection Chemistry and Regulatory Harmonization which will be held from 15-19 September 2012 in Beijing, China.

RECENTLY COMPLETED PROJECTS

Project Name (No.)	Leader	Status
Global Availability of Information on Agrochemicals (2008-041-1)	Unsworth	Projected <u>completed</u> . Continuation of earlier project (2001-022-1) to provide for website maintenance and expansion. The website is up and running (http://pesticides.iupac.org) some problems were experienced with attacks on the website but these have been overcome. It is now necessary to maintain and add to the website in order to keep it up to date.

ACTIVE PROJECTS

Project Name (No.)	Leader	Status
Evaluation of food and feed safety implications of (altered) residues of pesticides applied on transgenic (GM) crops (2006-015-3)	Kleter	Project <u>ongoing</u> . Paper published by Pest Management Science: Kleter, G.A., Unsworth, J.B. and Harris C.A.(2011) The impact of altered herbicide residues in transgenic herbicide-resistant crops on standard setting for herbicide residues , <i>Pest Management Science</i> <u>67</u> 1193 – 1210. See also Kleter, G.A., Unsworth, J.B. and Harris C.A.(2012) Genetically modified, herbicide-resistant crops , <i>New Food Magazine</i> <u>15</u> 19-22.
Environmental risk assessments for the registration of pesticides used in rice paddy fields (2006-044-2)	Linders	Project <u>ongoing</u> . Task group meeting and symposium held Oct-2007. Task group meetings held in 2009 and 2011. Draft report has been prepared, with finalization scheduled for September 2012.
Development of a Pesticide Ecological Risk Assessment and Training Module (2008-011-2-600)	Parker	<u>Continuation</u> of earlier project (2004-011-1) to advance a training initiative with national regulatory authorities for the IUPAC project-related materials that have been developed. Project ongoing.
Quantitative Review and Analysis of Pesticide Sorption and Its Effect on Degradation in Relation to Soil and Climate: (2010-018-2-600)	Chen	Project <u>ongoing</u> . This project evolved from Quantitative Review of Pesticide Environmental Fate Parameters and (2010-018-1-600) following comments from the DCE. Task group has been formed, first task group meeting held in August 2011.
Global Framework for Implementing Consistent Ecological Risk Assessment of Pesticides for Sustainable Agriculture: (2010-056-1-600)	Unsworth	A telephone conference was held in March 2011 and a task group meeting was held in August 2011. Four chapters of documentation have been prepared. Planning is underway for a workshop to be held in Beijing on September 16-17.
A Support Team for Enhancing, Maintaining and Ensuring the Future of the Pesticides Properties Database (PPDB) (2010-060-1)	Wauchope	Project <u>initiated</u> . Task group members identified.
Critical review of approaches to dietary risk assessment for pesticides (2011-023-2)	Harris/ Caldas	Project <u>initiated</u> . Task group members identified.
2012-003-1-600	Racke	Project set up to receive donation from Dow AgroScience for sponsorship of the IUPAC International Award for Advances in Harmonized Approaches to Crop Protection Chemistry
2012-010-1-600	Racke/ Unsworth	Project set up to receive donations from sponsors of the 4 th International Symposium on Pesticide and Environmental Safety & 8 th International Workshop on Crop Protection Chemistry and Regulatory Harmonization conference

NEWLY PROPOSED PROJECTS

Project Name (No.)	Leader	Status
Guiding principles to facilitate a harmonized ecological risk assessment framework for nano-pesticides in the environment	Kookana	Proposal submitted and awaiting DCE review and approval. Task group members identified.
Inventory of regulatory safety requirements for genetically modified biopesticides and potential needs for international harmonization	Kleter	Proposal submitted and awaiting DCE review and approval. Task group members identified.
Indirect effects of transgenic crops through their impact on integrated and other pest and weed management practices	Kleter	Proposal submitted and awaiting DCE review and approval. Task group members identified.
Development of IUPAC Good Modeling Practice (GMP) Guidelines for Pesticide Ecological Exposure Assessment and Risk Management	Parker	Proposal submitted and awaiting DCE review and approval. Task group members identified.
The Importance of Chemistry in Maintaining a Secure Food Supply	Unsworth	Proposal submitted and awaiting DCE review and approval. Task group members identified.
4 th Latin American Pesticide Residues Workshop, Bogota, Colombia	Dallos	Proposal submitted and awaiting DCE review and approval. Task group members identified.

PROJECTS PENDING

Project Name (No.)	Leader	Status
How harmonised are Maximum Residues Limits (MRLs)? (2011-024-2)	Harris/ Caldas	When reviewed by the DCE it was proposed that this project should be considered as a follow on to project 2011-023-02 (see above) and should be submitted later for a decision on funding.

TECHNOLOGY TRANSFER ACTIVITIES

- **“43rd IUPAC World Chemistry Congress & 46th IUPAC General Assembly”**, San Juan, Puerto Rico, July 30 – August 5, 2011. During the Congress a symposium entitled **“Advanced Physico-Chemical Techniques to Solve Environmental Science Challenges”** was organised by L. McConnell. This symposium was supported by the Society of Environmental Toxicology and Chemistry (SETAC), the American Chemical Society and the IUPAC Chemistry and Environment Division (VI). Several members of the committee made presentations giving where appropriate data derived from IUPAC projects.
- **“2nd International Conference on Agrochemicals Protecting Crops, Health and Natural Environment – The Role of Chemistry for Sustainable Agriculture”**, New Delhi, India, 15-18 February 2012. *The conference, which was sponsored by IUPAC, together with the Indian Agricultural Research Institute (IARI), the Indian Council of Agricultural Research (ICAR) and the Society for the Promotion of Sustainable Agriculture (SPSA), attracted 415 delegates including a significant number of international delegates and it was pleasing to note the presence of a large number of young scientists. The scientific program was organised with 20 technical sessions consisting of 17 plenary lectures, 28 invited lectures, 82 oral presentations and 176 poster presentations. Plenary lectures were given by three IUPAC members (J.B.Unsworth - The World Wide Web – A Rich Source of Information on Pesticides; J.B.H.J. Linders –Environmental Risk Assessments for the Registration of Pesticides Used in Rice Paddy Fields; G.A. Kleter – Impact of Transgenic crops on Pesticide Residues) during which the findings of the relevant IUPAC projects were highlighted. As a result of the conference there was increased interest in IUPAC and two new members were added to the affiliate members list.*

- **“4th International Symposium on Pesticide and Environmental Safety & 8th International Workshop on Crop Protection Chemistry and Regulatory Harmonization”**, Beijing, China, 15-20 September 2012. Organized by Beijing Society of Pesticide (BSP) and Pesticide Science Society of Japan (PSSJ) and sponsored by IUPAC. This meeting has been combined with the **5th Pan Pacific Conference on Pesticide Science** because of issues in Japan due to the problems at Fukushima. The meeting will focus on global views and harmonized approaches to pesticide regulation, pesticide residues in food and international trade standards, environmental safety assessment of pesticides, pesticide quality, manufacturing, specifications, new Pesticide discovery and synthesis, formulation and application techniques. J.B. Unsworth is a member of the organizing committee, whilst K.D. Racke, G.A. Kleter and A. Katayama have been designated as co-chairs for various sessions during the conference. In addition several members of the committee are also scheduled to give presentations during the conference. Further information can be found at <http://www.2012iupac.com>.
- **“13th IUPAC International Congress of Pesticide Chemistry”**, San Francisco, USA, 24-28 August 2014. Organized by the Agrochemicals Division (AGRO) of the American Chemical Society and sponsored by IUPAC. This conference will be held concurrently with the 248th American Chemical Society National Meeting and Exposition. Main scientific topics will include 1) discovery, mode of action, resistance management, 2) biotechnology, 3) non-crop uses, 4) environmental fate and ecological impacts, 5) food residues and human exposure, and 6) regulation, stewardship, and delivery systems. Further information can be found at <http://www.iupac2014.org/>.

MISCELLANEOUS

- **IUPAC International Award for Advances in Harmonized Approaches to Crop Protection Chemistry** – This award which is sponsored by Dow AgroSciences is presented every two years in even numbered years. Several nominations were received and the winner for 2012 is Dr. Lois Rossi of the Registration Division, US Environmental Protection Agency, see <http://www.iupac.org/news/news-detail/article/lois-rossi-to-receive-the-international-award-for-advances-in-crop-protection-chemistry.html>. The award will be presented to Dr. Rossi at the 4th International Symposium on Pesticide and Environmental Safety & 8th International Workshop on Crop Protection Chemistry and Regulatory Harmonization where she will also give a plenary lecture.

Respectfully submitted,

John Unsworth, Chairman