

## LuWQ2017\_abstracts\_oral\_and\_poster\_for\_web\_266\_08Apr2017.pdf

The full list of authors will later be available in Conference Programme

The green marked orals are submitted by members of Scientific Advisory Committee

### Abstracts accepted for ORAL PRESENTATION

Abstract no.	Surname	First Name	Country	Abstract Title
6	Wendland	Frank	DE	Nitrogen pollution of groundwater and surface waters in Lower Saxony, Germany: Status quo and management options
7	Tiktak	Aaldrik	NL	Evaluation of the Water Framework Directive in the Netherlands
10	Osmond	Deanna	US	The limits and of science discovery in policy: A case study from North Carolina and Colorado
17	Kuells	Christoph	DE	Land use impact archives in soil profiles
21	McDowell	Richard	NZ	Using flow regimes to determine how well catchments buffer water quality contaminants
22	Chambers	Patricia	CA	Nutrient export from Canadian prairie watersheds in relation to land use and a changing climate
24	Lischeid	Gunnar	DE	What surface water tells about land use effects on groundwater quality – and what it does not
25	Renwick	William	US	A 21-year record of changing agricultural land management and water quality in the Midwestern USA
26	GOURCY	Laurence	FR	Estimating nitrate and pesticide transfer mode within the unsaturated zone of a fluvioglacial aquifer and its implication on spatial and temporal concentration variability
28	Thorling	Lærke	DK	P in groundwater and groundwater dependent ecosystems
29	Stutter	Marc	GB	Relationships between soil test P and drain water P leaching: An initiative combining science and farmer knowledge
30	Moore	Philip	US	Effects of buffer strips and grazing management on soil loss from pastures
31	Maxwell	Iain	NZ	Stakeholder processes used to develop a Regional Land & Water Strategy, and a Catchment Plan for Tukituki River, by Hawke's Bay Regional Council, New Zealand
34	Bolster	Carl	US	Improving models for describing phosphorus cycling in agricultural soils
35	SURDYK	Nicolas	FR	Estimating pressure and impact of nitrates on groundwater at national level: New methodological developments
36	Bedford	Gary	NZ	Transforming the stream banks of Taranaki

37	Rohde	Ken	AU	Paddock to Reef program: Monitoring runoff and water quality from improved agricultural land management practices in catchments draining to the Great Barrier Reef, north-eastern Australia
39	Nilsson	Bertel	DK	Understanding hydrogeology to guide optimal location of nitrogen mitigation measures in the landscape
40	Svanbäck	Annika	SE	Increased nutrient recycling in agriculture around the Baltic Sea: Implications for eutrophication
41	Lescot	Jean-Marie	FR	Eutrophication: Where do we stand with economics?
43	Merz	Christoph	DE	Multivariate analysis to assess the impact of irrigation on groundwater quality
46	Valkama	Elena	FI	Catch crops: Current results and future perspectives on environmental potential and cost-effectiveness
47	Noij	Gert-Jan	NL	From annual nutrient cycling assessment to water management assessment in dairy farming
49	Thornton	Craig	AU	The Brigalow Catchment Study: The impacts of developing Acacia harpophylla woodland for cropping or grazing on hydrology, soil fertility and water quality in the Brigalow Belt bioregion of Australia
51	Bleeker	Albert	NL	Evaluating the Dutch fertilizer and manure policies: How successful were they in reaching the targets of the Nitrate Directive and Water Framework Directive?
52	Groenvald	Per	DK	Groundwater protection – a story of success from northern Denmark
54	Smith	Douglas	US	Coupled C/N/P stoichiometric shifts as influenced by land-use and hydrological
55	Koopmans	Kim	BE	A concerted action within the flanking policy supports Flemish farmers in sustainable fertilizer use and helps to improve water quality
59	Dams	Jef	BE	Groundwater vulnerability maps for pesticides for Flanders
60	Hansen	Birgitte	DK	Groundwater nitrate response to sustainable nitrogen management
61	Casal	Laurene	FR	Evaluating scenarios of land management practices using a nitrogen landscape model: Comparing the effectiveness on mitigation nitrogen fluxes of optimizing
62	Broers	Hans Peter	NL	Protecting the groundwater resources in the Netherlands: Strategies and challenges
63	Howes	Jay	NZ	Duration controlled grazing to reduce nitrate leaching from grazed dairy pastures in New Zealand – An eight-year field study
67	Rodríguez-Galleç	Lorena	UY	30 years of monitoring and modelling to support the collaborative management of a coastal lagoon protected area: Are we preventing eutrophication?

69	McCrackin	Michelle	SE	Legacy phosphorus in the Baltic Sea catchment and implications for managing eutrophication
72	Christel	Wibke	DK	Standardization of complexity: The challenge of transferring conditions given in individually issued environmental permits to general rules, while securing the level of environmental protection
74	Janssen	Manon	DE	Effect of grass buffer strips on nitrate export from a drained lowland field site
76	Gascuel-Odoux	Chantal	FR	Storage and fluxes of phosphorus in soils, riparian wetlands and surface water: The case of Brittany, a hotspot of P input due to intensive animal breeding
78	Goeller	Brandon	NZ	Trialling stream rehabilitation tools to attenuate nitrate export and improve stream health in agricultural waterways
82	Pearce	Andy	NZ	Implementation of Ruataniwha Water Storage Scheme (RWSS) to achieve combined environmental, economic and social objectives – Carrots and Sticks!
84	Stockan	Jenni	GB	Buffers for biodiversity: Trade-offs and interactions
85	Hoffmann	Carl Christian	DK	Nutrient retention in a subsurface flow constructed wetland with a matrix of woodchips combined with a pond for peak flow reduction
86	Dupas	Rémi	DE	The role of mobilisation and delivery processes on contrasting nitrogen and phosphorus exports in groundwater fed catchments
88	Uusi-Kämpä	Jaana	FI	A long-term field experiment: Effect of buffer strips on erosion and nutrient losses in boreal conditions
89	Jensen	Henning	DK	Increased P retention but decreased N retention in filterbed soil amended with ferric oxyhydroxide: An experimental study
90	Thomas	Ian	IE	Delineating critical source areas of diffuse pollution at the sub-field scale using LiDAR DEMs
93	Leccia Phelpin	Odile	FR	Effectiveness of buffer strips for reducing pesticides and nitrogen transfers to water streams
94	Turner	Ryan	AU	Pressure in a world heritage area: Water quality in the Great Barrier Reef
99	Kivits	Tano	NL	Veterinary antibiotics in young Dutch groundwater under intensive livestock farming
100	van den Brink	Cors	NL	Issues in extrapolating successful measures at farm scale to regional scale
102	Tits	Mia	BE	Is 50 mg nitrate per litre a realistic limit value in all surface waters? A case study in Limburg (Belgium)

103	Hansen	Anne Lausten	DK	Potential benefits of a spatially targeted regulation based on detailed N-reduction maps to reduce N-load from agriculture in groundwater dominated catchments
104	Odeurs	Wendy	BE	Monitoring of Flemish farms benefiting from derogation: Design and organisation of a well-balanced and simplified monitoring network
107	Gros-Calvo	Meritzell	ES	Persistence and fate of veterinary antibiotics and pharmaceuticals in agricultural soils following manure amendment and evaluation of their potential to migrate to groundwater bodies
110	Schönhart	Martin	AT	Scenario results from an integrated impact assessment of climate change, land use, and adaptation policies on water resources in Austria
112	Jadczyzyn	Tamara	PL	Nitrogen and phosphorus in shallow groundwater and major rivers in Poland
114	Bartosova	Alena	SE	Spatial patterns and trend analyses on pan-European scale: Modelling of riverine nutrient concentrations
119	Zak	Dominik	DK	Nitrogen removal in intelligent buffer zones: A first evaluation of novel constructed wetlands
120	Mockler	Eva	IE	Trends in nutrients pressures and emissions to water in Ireland: Are mitigation measures having an impact?
122	Tetzlaff	Björn	DE	Distributed modelling of phosphorus inputs from diffuse and point sources for the state of Schleswig-Holstein (Germany) to support river basin management according to EU-WFD
123	Kruisdijk	Emiel	NL	Reactive transport modelling of nutrient fate during managed aquifer recharge of agricultural drain water
124	Ross	Donald	US	The potential contribution of streambanks to phosphorus-driven eutrophication in a mixed land-use basin, Lake Champlain (Vermont, USA)
125	Deakin	Jenny	IE	'The right measure in the right place' – Targeting measures to implement the WFD in Ireland
127	Rosenstand Poul	Jane	DK	Significant differences in nitrogen emission from three Danish agricultural catchments – how can emissions be most cost-effectively documented [presented by Brian Kronvang]
128	Retike	Inga	LV	Isotopic signatures of precipitation and surface water-groundwater interaction in Salaca River basin (Latvia)
130	Højberg	Anker	DK	Accounting for natural reduction of nitrogen
134	McDonald	Noeleen	IE	Assessment of diffuse phosphorus mitigation measures in two contrasting arable catchments over a four year period across the nutrient cascade

135	Dalgaard	Tommy	DK	A planning tool for multifunctional buffer strips – examples and scenario studies from Danish landscapes
136	Pease	Lindsay	US	Phosphorus export from artificially drained fields across the Eastern Corn Belt, USA
137	Blombäck	Karin	SE	The agricultural share of eutrophication: Calculations of leaching loads of nitrogen and phosphorus from Swedish arable soils
138	Kyllmar	Katarina	SE	Agricultural impact on groundwater quality – Long-term monitoring at field and catchment scale
139	Duncan	Emily	US	Soil test phosphorus: A proxy for P risk in tile drained landscapes
141	Graversgaard	Morten	DK	Policy processes behind the implementation of nitrogen mitigation measures in EU – with examples from Denmark and Netherlands
143	van Loon	Arnaut	NL	Impact of nitrogen fertilization on raw water quality across the Netherlands: Signatures, patterns and trends (2000-2015)
144	Andersen	Hans Estrup	DK	Land use and the concentration of dissolved phosphorus in soil- and groundwater
148	Farlin	Julien	LU	A pesticide screening tool to set monitoring priorities and guide management measures
149	Hoogeveen	Marga	NL	Mineral management, economic performance and water quality: A comparison of two groups of dairy farms [presented by Tanja de Koeijer]
150	Thirup	Christian	DK	Groundwater protection in Denmark – from a practical view
151	Hille	Sandra	DK	The impact of different harvest regimes on phytoremediation in buffer strips
153	Hoogsteen	Martine	NL	Contrasting outcomes of statistical methods to assess if animal manure and mineral fertilizer have different effects on nitrate leaching [presented by Henri Prins]
154	Hoogsteen	Martine	NL	Water quality of springs in southern Limburg, the Netherlands: Does sampling period matter? [presented by Eke Buis]
155	Leendertse	Peter	NL	“Clean water approach”: 75% reduction of pesticide pollution in groundwater
156	Taylor	Kenneth	NZ	Our Land and Water National Science Challenge: Science to transform our agricultural landscapes
158	GOBILLOT	Arnaud	FR	Plot, field and catchment scales: a participatory investigation aiming at setting best management within the Vittel mineral watersheds
163	Krzeminska	Dominika	NO	Buffer zones along Norwegian agricultural streams: From phosphorus traps to multifunctional mitigation measures

164	Helliwell	Rachel	GB	A preliminary assessment of the performance of the PLUS+ (Phosphorus Land Use and Slope) model to evaluate WFD compliance in Scottish standing waters
167	Collins	Adrian	GB	Projected impacts of a bottom-up approach to mitigating diffuse pollution from agriculture: Experience from Demonstration Test Catchments, UK
168	Browning	Simon	GB	Integrating sophisticated mapping, modelling and monitoring techniques to effectively target land management advice for the benefit of improved soils, habitats and water quality
169	Schipper	Peter	NL	Diffuse nutrient loads – perspectives to improve water quality in peatland polders with intensive livestock
171	TOURNEBIZE	Julien	FR	Three years monitoring of nitrate and pesticides mitigation with an artificial wetland receiving agricultural drained flow at catchment scale
172	Zhang	Yusheng	GB	A risk matrix for informing the mitigation of agricultural diffuse water pollution across England and Wales
173	Feuerbach	Peter	SE	Removing a wetland migration barrier while increasing nutrient retention and biodiversity – a case study from LIFE-GOODSTREAM
174	Heidecke	Claudia	DE	Towards a consistent and high resolution regional nitrogen balance for municipalities in Germany
176	Phillips	Natalie	GB	Field scale modelling of agricultural nitrate losses to groundwater using the Nitrate Leaching Tool
177	Vrijhoef	Astrid	NL	Mapping nitrate concentrations in water leaching from the rootzone for agricultural areas in the Netherlands (2007-2010)
178	Lukács	Saskia	NL	Ten years of derogation in the Netherlands (2007-2016)
179	Olofsson	Stina	SE	Focus on nutrients, a voluntary initiative for environment and economy
180	Groenendijk	Piet	NL	Reduction goals for the nitrogen and phosphorous load on regional surface waters from agricultural land in the Netherlands
183	Skarbøvik	Eva	NO	Use of sensor data to assess the uncertainty of different water sampling methods in an agricultural stream
185	Burger	David	NZ	Integrated catchment modelling to quantify and manage nutrient loads from agricultural catchments in New Zealand
186	Stenger	Roland	NZ	Nitrate assimilation capacity of shallow groundwater underlying dairy farms in the Reporoa Basin, New Zealand
188	Windolf	Jørgen	DK	Spatial and time variations in agricultural loss of nitrogen to 44 small Danish streams (1990-2015)
189	Blicher-Mathieser	Gitte	DK	The plan for a new targeted regulation of agriculture in Denmark

190	Wattel	Esther	NL	How to evaluate your monitoring programmes: Examples of do's and don'ts from Denmark and the Netherlands
191	Gyllström	Mikael	SE	Analysis of cost-effectiveness of P-measures in Sweden for the Water Framework Directive: From national to water body scale
195	Rasmussen	Anton	DK	Adaptation by farmers to mandatory reduction of fertilizer application rates to crops in Denmark
197	Lötjönen	Sanna	FI	Does crop rotation with legumes provide an efficient means to reduce nutrient loads and GHG emissions?
199	Jiang	Yefang	CA	Effects of delayed plowing forages within potato rotation on nitrate loadings to receiving estuary
202	Deelstra	Johannes	NO	Where does the water go? And the nutrients – and soil particles
203	Sisák	István	HU	Manipulation of digital elevation data to model human altered surfaces and hydrological uncertainties
207	Elofsson	Katarina	SE	The revealed preferences of Baltic Sea governments: Goals, policy instruments, and implementation of nutrient abatement measures
208	van der Grift	Bas	NL	Biogeochemical and hydrological controls on phosphorus transport in lowland catchments
209	Jansen	Stefan	NL	Organic substrate dosing strategies to nitrate removing bioreactors
210	Howden	Nicholas	GB	Planning and policy for water quality: Where do we start, what do we aim for, and how long will we wait?
211	Aftab	Ashar	GB	Economics of incentivising spatially targeted policies based on SCIMAP risk mapping
212	Carstensen	Mette	DK	Can controlled drainage control agricultural nutrient emissions?
213	Hoogeveen	Marga	NL	Exploring the design of the Dutch Minerals Policy Monitoring Programme (LMM) under the 6th Nitrate Action Programme
216	Acutis	Marco	IT	Effect of conservative agriculture on nitrate and phosphate leaching: The Lombardy case study (northern Italy)
217	Reaney	Sim	GB	Spatial targeting of diffuse pollution mitigation features: From landscapes to sub-catchments within the SCIMAP approach
221	Middleton	Bob	GB	Voluntary approaches really do work: An English example
223	Rolighed	Jonas	DK	Monitoring of nitrogen leaching on Danish derogation farms
225	Leggatt	Alister	GB	Utilising catchment management techniques to address the impacts of metaldehyde on drinking water quality: A case study from a UK water company
227	Hasler	Berit	DK	Farm experimental survey of agri-environmental voluntary measures in countries around the Baltic Sea

228	Cetin	Mahmut	TR	Quantifying the impacts of crop types on groundwater nitrate loads in an irrigation scheme of southern Turkey
229	Bechmann	Marianne	NO	Impact of climate change on land use and surface water quality: Results from long term monitoring in Norway
232	van der Molen	Diederik	NL	How to stimulate the water and agriculture nexus?
234	Hooijboer	Arno	NL	Effects of crop rotation on water quality in the Netherlands: Combining the Minerals Policy Monitoring Programme and Nation-wide survey of crop data of the sandy regions of the Netherlands
237	van der Aa	Monique	NL	Consequences of Dutch manure policy 1990-2030 on groundwater quality in drinking water protection areas
243	Burbery	Lee	NZ	Tailoring denitrifying bioreactor technologies to alluvial gravel aquifers in New Zealand
245	Fidelis	Teresa	PT	Challenging land-use through water resources planning – assessing the formulation of the programs of measures under the WFD first and second planning cycles in Portugal
247	Williams	John	GB	Nutrient losses from solid manures stored in temporary field heaps
250	Dahan	Ofer	IL	In-situ monitoring of agricultural return flow impact on groundwater quality
259	MUHAMMETOGLU	Ayşe	TR	Assessment of environmental impacts of pesticides using risk indicators: Altinova-Turkey and El-Hajeb-Morocco case studies
266	Frątczak	Wojciech	PL	Effectiveness of enhanced buffer zone during 4 years after construction

## Abstracts accepted for POSTER PRESENTATION

Abstract no.	Surname	First Name	Country	Abstract Title
9	Osmond	Deanna	US	Nutrient losses and reductions: A comparison of physiographical regions and conservation practice in North Carolina
16	NADIRADZE	Kakha	GE	Healthier soil and protected groundwaters
20	Jabro	Jay	US	Suction cup samplers for estimating nitrate-nitrogen in soil water in irrigated
27	Kehdy	Naji	LB	The influence of the river water quality on irrigated crops: Case of the Berdawni River, Beqaa, Lebanon
32	Maxwell	Iain	NZ	Board of Inquiry – a quasi-judicial adversarial process with extensive stakeholder input: Legal decision-making on a Catchment Plan for Tukituki River and the Ruataniwha Water Storage Scheme, New Zealand



38	Yuan	Chengcheng	CN	Assessing impacts of rural livelihood transition on non-point source pollution in the Dongting Lake region at the scale of small catchment: A coupled model by MAS and IECM
42	Rozemeijer	Joachim	NL	Smartphone based water quality monitoring: Enhancing nutrient loss reduction practices via instantaneous on-farm nitrate data
48	HENNEN	WIL	NL	Assessing nitrogen surplus for individual farms based on comparable farms: A genetic algorithms approach
57	Klein	Janneke	NL	Bridging the gap between farms and catchments: Combined nutrient data analysis for 450 farms and 200 agriculture specific headwaters in the Netherlands
71	Turner	Ryan	AU	The environmental fate of micro-pollutants from greywater irrigation
73	Panasenko	Viktoriia	UA	Modern transformation of crop rotation in Ukraine as a factor of soil erosion resistance and quality safety of surface waters
77	Gascuel-Oudoux	Chantal	FR	A framework and a set of tools called Nutting models to estimate retention capacities, loads of nitrogen and phosphorus, and their uncertainties in rivers at catchment and national level (France)
79	Collins	Katie	NZ	Testing and developing tools for weed macrophyte control in Canterbury agricultural waterways [presented by Jon Harding]
80	Watkins	Natalie	NZ	OVERSEER® Nutrient Budgets – New Zealand's leading nutrient management tool
81	Harding	Jon	NZ	Optimising both scale and objectives of agricultural stream restoration activities to increase likelihood of success
83	Wilson	Peter	NZ	Pollution In Paradise – New Zealand's challenge to handle non-point and diffuse source pollution
87	Egemose	Sara	DK	Phosphorous composition and mobility in retention ponds
91	Uggeldahl	Kennet	DK	Public preferences for buffer strips in Denmark: An economic valuation study [presented by Tommy Dalgaard]
92	BOY-ROURA	MERCE	ES	Spatio-temporal variability of antibiotic pollution and multi-resistant bacteria in an agricultural area: The Baix Fluvia alluvial aquifer, northeastern Spain [presented by Meritxell Gros-Calvo]
95	Jomaa	Seifeddine	DE	Impact of agricultural measures on stream water quality in lower mountain region in eastern Germany
98	Yang	Xiaoqiang	DE	A newly developed grid-based water quality model: Nitrate leaching and transport analysis at catchment scale
101	Turner	Ryan	AU	Measuring and reporting on the Great Barrier Reef, through the Paddock to Reef Integrated Monitoring, Modelling and Reporting Program

105	Karlsen	Claudia	DK	Runoff from catchments with varying land-use has different impact on stream quality: A GIS-study
106	Dupas	Rémi	DE	C, N, P export regimes in rivers from headwater to downstream catchments
108	Akoumianaki	Ioanna	GB	A weight-of-evidence method for catchment management
109	LANDEMAINE	Valentin	FR	Modelling the impact of control measures on changes in runoff and sediment transfers: A multiscale study
111	Akoumianaki	Ioanna	GB	A method for targeting payments for agri-environment options to deliver maximum benefit for water quality
116	Momol	Esen	US	A statewide best management practices training program that promotes urban environmental stewardship in Florida
118	Pacholski	Andreas	DE	Effects of DMP based nitrification inhibitors on water quality by reduced nutrient leaching and increased nutrient efficiency
121	Tetzlaff	Björn	DE	Identification of surface waters in Lower Saxony polluted by human pharmaceuticals
126	Stutter	Marc	GB	Eco-engineering approaches to improve riparian buffer strip functions
131	Dalgaard	Tommy	DK	Land use and landscape management practices for reduced nitrogen pollution
132	Hrekov	Valerii	UA	Moisture control in steppe soil under conditions of climate change and
142	Graversgaard	Morten	DK	Public perceptions of agriculture, buffer strips and water planning in Denmark
145	Molina-Navarro	Eugenio	DK	Modelling the hydrological and water quality impacts of plausible land use change scenarios in a lowland catchment
146	van Loon	Arnaut	NL	Probabilistic groundwater travel time modelling as a risk-management approach for protection of drinking water production sites in a changing and uncertain world
152	Marques dos Sar	Cláudia	PT	Aquatic ecosystems under agricultural nitrogen pressures in Portugal and Denmark [presented by Brian Kronvang]
161	Kruisdijk	Emiel	NL	Monitoring salinity in surface water systems by voluntary participants
162	Spijker	Job	NL	Spatial prediction of nitrate concentrations in groundwater using a machine learning approach
166	Zak	Domink	DK	Soil phosphorus storage in riparian landscapes depends on local landform
187	Stenger	Roland	NZ	Nitrogen and phosphorus exports from artificially drained dairy pastures in the Hauraki Plains, New Zealand
192	Jadczyzyn	Jan	PL	Impact of soil conservation tillage systems on quantity and quality of run-off

193	Tornbjerg	Henrik	DK	Successful reduction of diffuse nitrogen emissions at catchment scale: Example from pilot River Odense, Denmark
198	Marques dos Sar	Cláudia	PT	Addressing water resources protection and agriculture development in a transboundary river basin: The nitrogen factor in Tagus River (Portugal/Spain)
200	Jolankai	Zsolt	HU	Small catchment scale application of the Moneris model for Hungary's RBMP to estimate diffuse source nitrogen and phosphorus emissions
201	IBRIKCI	Hayriye	TR	SWAT modelling approach to irrigated land management for mitigation of nitrogen loss [presented by Mahmut Cetin]
219	Lyu	Jun	CN	Baseflow dissolved phosphorus export from a rainy agricultural watershed: Model development and loading estimation
224	de Koeijer	Tanja	NL	Assessment of manure application on intensive livestock farms
231	Reetsch	Anika	DE	Soil-water-waste-nexus: Closing nutrient and energy cycles in African smallholder farming systems
241	Doody	Donnacha	GB	Impact of low emission slurry spreading on phosphorus loss in overland flow
242	Castellano-Hinoj	Antonio	ES	Nitrous oxide emission and abundance of nitrifying and denitrifying populations as affected by fertilization type and soil depth
244	Burkitt	Lucy	NZ	High resolution monitoring of nitrate in rivers and streams in agricultural catchments: A case study of the Manawatu River, New Zealand
248	van Beelen	Patrick	NL	How to deal with measurements below the detection limit?
253	Kraft	Michael	DE	Influences of drought events on soil moisture and nitrate concentration under different land use conditions in south-western Germany
255	Bock	Michael	DE	Modular decision support tool for precision agriculture application based on a free GIS software environment: Risk assessment of runoff driven onsite and offsite effects
256	Sperotto	Anna	IT	Multi-risk assessment of climate and land use changes on water resources: A Bayesian Network approach
258	MUHAMMETOGLU	Ayşe	TR	Assessment of groundwater vulnerability in a karstic aquifer using index-based methods: Altinova-Turkey case study
263	Granell Ruiz	Rafael	BE	Analysing factors to enhance the adoption of innovative water management solutions in fertigated crops
265	Frątczak	Wojciech	PL	Action plan for reduction of diffuse pollution – the Pilica River catchment case