Dr Iwona Wagner

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Director for International Cooperation and UNESCO in European Regional Centre for Ecohydrology under auspices of UNESCO Polish Academy of Sciences

Education

- 1995 - MSc. - University of Lodz, Faculty of Biology and Earth Sciences, „Global Climate Warming and Its Potential Impact on Freshwater Ecosystems Processes - on the Example of Sulejow Reservoir and the Pilica River"
- 2002 - PhD. - University of Lodz, "Influence of the selected climatic, hydrological and biological factors on eutrophication processes and symptoms in the Sulejów Reservoir

Main research areas

- Biotic / abiotic regulations of nutrient transformations in river-floodplain system
- Hydrological control of ecological processes in reservoirs and eutrophication
- Effect of global climate change on ecohydrological processes
- Implementing ecohydrological projects

Professional experience

- 1996 - 2001- UNESCO IHP-V 2.3/2.4 Project on Ecohydrology; Scientific Secretary
- 2002 - present - UNESCO IHP-VI, Programme " Ecohydrology"; Scientific Secretary
- 2003 - Consultant for Ecohydrology and Phytotechnology Programmes, for United Nations Environment Programme, International Environmental Technology Centre (UNEP-DTIE-IETC), Shiga, Japan
- 2004 - present - Member of a Special IHP-VII Task Force Group, UNESCO

Scholarships and courses completed

- 2006, 12-17 VI - PhD Course on Ecosystem Analysis and Networks, University of Copenhagen, Denmark
- 2002 IX 16-17 - Applications of CCHE2D Model to the Study of Flow and Sediment Transport in open channels. National Center for Computational Hydroscience and Engineering of the University of Mississipi & Warsaw University of Technology. Warsaw
- 1999, 08-22IX - UNESCO IHP-V Advanced Study Course in Ecohydrology. Poland, Austria, Hungary, Croatia, Italy
- 1999, 16-24III - Training on Adaptive Practices for Sustaining Nature and Society. Minnesota, USA
- 1994 VI - Training on Practical and Field Methods in Hydrobiology. University of Ulster, Ireland
- 1994 II-VI - TEMPUS Scholarship. University of Wolverhampton, UK
- 1993, 01-15VII - Short Intensive Course in Environment Sciences - Ecology and Conservation; University of Wolverhampton, UK; Agricultural Teacher Training Institute's-Hertogenbosh, Holland.

Research projects

- 1997-1998 - The role of climatic and hydrological factors in processes of eutrophication and regulation of Phytoplankton dynamics in the Sulejów Reservoir. KBN 6 PO4F 005 12
- 1998-2000 - Control of hydrological and biogeochemical processes toward reduction of eutrophication of lowland dam reservoirs (The subject submitted for realisation in UNESCO IHP-V Project 2.3/2.4 on Ecohydrology). KBN 6 PO4F 010 14
- 1999-2000 - Nutrient outflow from the Sulejow Reservoir by hydrological regime regulation. KBN 6 PO4F 003 15
- 2002 – 2005 - Pathways of nutrient flow in the upland (Solina, Myczkowce) and lowland (Sulejów, Zegrze) dam reservoirs of various hydrological regime. 3PO4G 057 22.
- 2003-2004 - Immobilising of Phosphorus and Sediments Loads in a Lowland River Floodplain. US-Poland Technology Transfer Project No. 8.
- 2005 – 2008 - Application of methods of mathematical statistics and statistical pattern recognition theory to shaping of a lowland Pilica river floodplain for reduction of eutrophication of the Sulejow Reservoir and bioenergy production; Project co-ordinator 2 PO4F 053 28

- 2005-20010 - SWITCH - Sustainable Water management Improves Tomorrow's Cities' Health. Project Officer for the project partner - University of Lodz. Project co-ordinator: UNESCO-IHE; EU FP6 IP Project
- 2005-20010 - Integration4Water; EU 6 FP IP Project

Publications

- Magnuszewski A., Kiedrzyńska E., **Wagner-Łotkowska I**., Zalewski M. 2005. Immobilising of Sediments in a Lowland River Floodplain. In: Altinakar M.S., Czernuszenko W., Rowiński P.M., Wang S.S.Y. (Eds.). Computational Modeling for the Development of Sustainable Water-Resources Systems in Poland. US-Poland Technology Transfer Program. Publications of the Institute of Geophysics Polish Academy of Sciences. Monographic Volume E-5 (387), pp 239-260.
- **Wagner-Lotkowska**, I., Bocian, J., Pypaert, P., Santiago-Fandino, V., Zalewski, M., 2004. Environment and economy - dual benefit of ecohydrology and phytotechnology in water resources management: Pilica River Demonstration Project under the auspices of UNESCO and UNEP. In: Ecology and Hydrobiology vol.4, No. 3 345-352.
- UNESCO/UNEP 2004: Integrated Watershed Management-Ecohydrology & Phytotechnology-Manual. Zalewski, M., **Wagner-Lotkowska I.** & Robarts R. D. [Eds]. UNESCO -IHP, UNESCO - ROSTE, UNEP- IETC, International Centre for Ecology PAS, Dpt. of Applied Ecology University of Lodz, Venice Osaka, Shiga, Warsaw, Lodz; pp 210;
- Wojtal A., Frankiewicz P., **Wagner-Łotkowska I**., Zalewski M. 2003. The evaluation of the role of pelagic invertebrate versus vertebrate predators on the seasonal dynamics of filtering Cladocera in a shallow, eutrophic reservoir. Hydrobiologia. Kluwer Acad,Pub.
- **Wagner-Łotkowska, I.** 2002. Znaczenie procesów ekohydrologicznych w ograniczaniu eutrofizacji zbiorników zaporowych. w: Praca zbiorowa: Stan środowiska w województwie Łódzkim w roku 2002. WIOŚ, Łódź.
- **Wagner-Łotkowska I.**, Bednarek A., Zalewski M. 2002. Management of flows in large rivers For water quality improvement. in: UNEP – IETC/UNESCO 2002. *Guidelines for the Integrated Management of the Watershed – Phytotechnology and Ecohydrology.* Zalewski, M. [Ed]. UNEP-IETC Freshwater Management Series No. 5
- M. Zalewski & **I. Wagner-Lotkowska,** 2002. Integration of recent advances in Ecology and Water Sciences for sustainable use of water resources. Proceedings of the International Conference Preventing and Figthing Hydrological Disasters. Timisoara, Romania. 21-22 November 2002. pp. 219 - 224.
- M. Zalewski & I. **Wagner**: 2002. Applications of Ecohydrology for reduction of land-ocean nutrient fluxes. Collection of Marine Research Works. Vol. XII. Supplement issue: Proceedings of a SCOPE Workshop on Land-Ocean Nutrient Fluxes: the Silica Cycle; Nha Trang, Vietnam, 25 – 27 September 2002; pp. 179 - 190.
- **Wagner-Łotkowska I.**, Zalewski M. 2002. Possibilities of hydrological processes regulation for reduction a lowland reservoir eutrophication. w: Proceedings of the 5th International Conference on Hydro -Science & -Engineering. Warsaw, Poland.
- Trojanowska A., Tarczyńska M., **Wagner I.**, Romanowska-Duda Z., Zalewski M. 2001. The importance of phosphatase Activity as compensatory mechanism for phytoplankton primary production in lowland reservoir (Poland). Proceedings of 9th International Conference on the Conservation and Management of Lakes, 11-16.11.2001, Otsu City, Shiga Prefecture, Japan. 3C/D-P83: 572-575.
- Zalewski M., Tarczyńska M., **Wagner-Łotkowska I.** 2000. Ecohydrological approach for elimination of toxic algal blooms in lowland reservoir. Verh. Internat. Verein. Limnol. 27 1–8.
- **Wagner I.,** Zalewski M., 2000. Effect of hydrological patterns of tributaries on biotic processes in lowland reservoir – consequences for restoration. Special Issue. Ecological Engineering 16: 79-90.
- Zalewski M. & **Wagner I. (red.),** 2000. *Ecohydrology – Advanced Study Course. Ecohydrology concept as problem solving approach*. Technical Documents in Hydrology No.34, UNESCO, 65 str.
- **Wagner I.,** 2000. Potential reduction of eutrophication and toxic algal blooms in the shallow Sulejow Reservoir (Central Poland) by control of tributaries and reservoir hydrology. w: M. Zalewski & I. Wagner (red.). *Ecohydrology – Advanced Study Course. Ecohydrology concept as problem solving approach*. Technical Documents in Hydrology No.34, UNESCO: 58-58.
- Zalewski M., **Wagner I.,** 1998. The effect of hydrological pattern of affluents on biotic processes in lowland reservoir. w: Zalewski M. & McClain M. (red.): *A List of Scientific Activities of IHP-V Projects 2.3/2.4 "Ecohydrology"*. Technical Documents in Hydrology No.21, UNESCO: 20-20.
- Zalewski M., **Wagner I.,** 1998. Temperature and nutrients dynamic in freshwater eutrophic ecosystems. Geoghaphia Polonica 71: 79-92.

- **Wagner I**. & Zalewski M., 1997. Potential effect of global climate changes on ecohydrological processes. In: Wiśniewski R. & Zalewski M. (eds): *Application of ecosystem technologies toward freshwater quality improvement*. Zeszyty Naukowe "Człowiek i Środowisko", 18, pp. 37-50 (in Polish).
- Zalewski M. & **Wagner I**., 1995. Potential impact of global climate warming on dam reservoirs processes. In: M. Zalewski (ed.): *Biological processes in protection and restoration of dam reservoirs*. Biblioteka Monitoringu Środowiska, Łódź, pp. 177-188 (in Polish).

Organisational memberships

Main honours and awards

- 2002 - Teamwork Award for of the Rector of University of Lodz, for research on Formulation, Development and Application of Ecohydrology Concept for Improvement of Quality of Freshwater Resources
- 2003 - Award of the Marshal of Lodz Province for PhD dissertation
- 2005 - First Award of the Rector of the University of Lodz for the best University Handbook published in 2004 (co-editor: Integrated Watershed Management-Ecohydrology & Phytotechnology- Manual. Zalewski, M., Wagner-Lotkowska I. [Eds]. UNESCO -IHP, UNESCO - ROSTE, UNEP- IETC, International Centre for Ecology PAS, Dpt. of Applied Ecology University of Lodz, Venice Osaka, Shiga, Warsaw, Lodz; pp 210)
- 2006 - Awards of Major of the City of Lodz for co-authorship of the publications cycle concern formulate and application of the Ecohydrology Concept for inland water quality improvement