

Dr hab. Małgorzata Godlewska

European Regional Centre for Ecohydrology under auspices of UNESCO
Polish Academy of Sciences
tel. +48 42 6817007
+48 22 8729304
fax. +48 42 6813069
e-mail: margogod@wp.pl; m.godlewska@erce.unesco.lodz.pl

Education and degrees

- M.Sc. in marine and freshwater physics 1971, Lomonosov University in Moscow, Russia
- Ph.D. in physics 1977, Institute of Geophysics, Polish Academy of Sciences
- D.Sc. in biology 1996, Institute of Ecology, Polish Academy of Sciences

Professional experience

- 1971 - Gdansk University, postgraduate studies
- 1971 - 1974 Institute of Geophysics, Polish Academy of Sciences, PhD studies,
- 1974 - 1981 Institute of Oceanology, Polish Academy of Sciences, Sopot, dr
- 1981 - 1992 Institute of Ekology, Polish Academy of Sciences, Warsaw, dr
- 1992 -1993 Department of Polar Research, Polish Academy of Sciences, Warsaw, dr
- 1993 - 1996 Institute of Ekology, Polish Academy of Sciences, Warsaw, dr
- 1996 – presently, International Centre for Ecology, Polish Academy of Sciences, assistant professor (docent)

Training abroad

- The British Council Scholarship, Birmingham University, UK (1980, 10 months)
- Institut für Fangtechnik, Hamburg, Germany (1983, 6 weeks)

Marine expeditions

- Atlantic Ocean on r/v „D. Mendelejev” 1970 (3 months)
- Atlantic Ocean on yacht “Sonda” 1976 (6 weeks)
- Spitsbergen on yacht "Sonda" 1978 (2 months)
- Antarctic (SIBEX - BIOMASS) on r/v "Profesor Siedlecki" 1983/84 (4 months)
- Antarctic (SIBEX II) on r/v „Profesor Besnard” 1984 (1 month)
- Antarctic (BIOMASS IV) on r/v "Profesor Siedlecki" 1988/89 (3 months)
- Baltic Sea on r/v „Oceania” 1998 (1 month)
- Baltic Sea on r/v “Oceania” 2005 (2 weeks)

Research interests

I have over 25 years experience in using acoustical methods for studies of aquatic ecosystems and estimating their living resources. In 80-ties I was involved in the international investigations of Antarctic krill (BIOMASS program). The work included the estimation of its stock as well as investigation of its distribution, aggregating behaviour and migrations. In recent years my focus has been mainly in ecology of inland waters. The investigations include fish stock assessment, patterns of fish distributions in relation to different environmental factors, horizontal and vertical migrations, and fish reactions to different stimuli's. Actually working on implementation of hydroacoustics in the long-term monitoring networks for the Water Framework Directive. The quality elements include fish (biomass, spatial distribution, size distribution, behaviour), macrophytes (coverage, height, depth limit) and bottom (depth, sediments structure, layers), thus the elements, that are essential for the understanding of the ecosystem functioning and are closely related to the ecological status of water bodies.

Research projects

Granted by the Polish State Committee for Scientific Research

- „Modelling of krill distributions in the selected areas of Western Antarctica” 1992-1996 - coordinator, final mark-very good
- „A prognostic model of the Solina-Myczkowce cascade reservoirs ecosystem functioning, with special emphasis on flood conditions” 1997-2000 - principal investigator, final mark - excellent

- „Determination of the target strength for the main fish species present in Polish lakes and reservoirs with special emphasis on juveniles” 2001-2004 – coordinator, final mark - excellent
- „Influence of daily and seasonal fish migration on the efficiency of biomanipulation in the lowland reservoir” 2002-2005- principal investigator, final mark – very good

Project supported by the European Union

- „FAME” (coordinator: Stephan Shmutz) 2001-2004
Development and harmonisation of fish-based assessment methods for the ecological integrity of European running waters. - participant

International cooperation projects

- Polish - Italian project „Determination of the trophic relationships between krill and its main predators in the ecosystems of the Ross Sea and Bransfield Strait” 1997-2000 (**coordinator**)
- Polish - Czech project „The application of hydroacoustical methods in aquatic ecosystems studies” 2001-2004 (**coordinator**).
- Polish - French Polonium program „Biological traits of pikeperch (*Stizostedion lucioperca*) and perch (*Perca fluviatilis*) in reservoirs. Acoustic studies of their behaviour, applications for management” 2002-2003 (**coordinator**).
- Polish-Austrian program “Integrating hydroacoustics into strategies for quantification of underyearling fish” 2003-2004 (**coordinator**)
- Polish- Austrian program “Distribution patterns within and among fish populations studied on widely differing spatial scales” 2005-2006
- Polish - French Polonium program “Sampling lake fish populations: intercalibration for the Water Framework Directive” 2006-2007

Recent publications

- Winfield I. J., Yallop M. L., Onofriou C., O’Connell M. J., **Godlewska M.**, Brown A. F. 2007 Assessment in two shallow lakes of a hydroacoustic system for surveying aquatic macrophytes and an example of its application. *Hydrobiology* 581: 111-119
- Doroszczyk D., Długoszewski B., **Godlewska M.** 2007 Comparison of acoustical estimates of fish abundance for different coverage and survey design. *Hydroacoustics* 10: 33-38
- Długoszewski B., Doroszczyk L. Maryńczak M., **Godlewska M.** 2007 Perspektywy wykorzystania hydroakustyki jako narzędzia oceny liczebności ryb w jeziorach dla potrzeb Ramowej Dyrektywy Wodnej. W: *Ochrona i rekultywacja jezior*. Wiśniewski R. i Piotrowiak J. (eds), Polskie Zrzeszenie Inżynierów i Techników Sanitarnych Oddział Toruń, Toruń, str. 237-243
- Doroszczyk L., Wołos A. **Godlewska M.**, Długoszewski B., Maryńczak M. 2007 Zasoby sielawy w wybranych jeziorach Pojezierza Mazurskiego – stan miniony, obecny i perspektywy. W: *Stan rybactwa w jeziorach, zbiornikach zaporowych i rzekach w 2006 roku*, IRS, Olsztyn, str. 53-67
- Doroszczyk L., Długoszewski B., Kanigowska E., **Godlewska M.** 2007 Hydroacoustic monitoring of vendace in selected Mazurian lakes. *Arch. Pol. Fish.* 15(2): 129-140
- Wojtalik J., **Godlewska M.**, Frankiewicz P., Zalewski M. 2006 Diurnal and seasonal fish horizontal migrations in the Sulejów reservoir, Poland. *Hydroacoustics* 9: 217-226
- **Godlewska M.**, Jelonek M. 2006. Acoustical estimates of fish and zooplankton distribution in the Piaseczno reservoir, *Aquatic Ecology* 40: 211-219
- **Godlewska M.**, Świerzowski A., Menshutkin V., Wanzenböck J. (2005) Can we precisely estimate fish sizes using acoustics. *Hydroacoustics* 8: 53-60
- **Godlewska M.** (2004) Target strength of freshwater fishes at 420 kHz measured in cages. *Hydroacoustics* 7: 55-62
- **Godlewska M.**, A. Świerzowski (2004) Hydroakustyka jako narzędzie monitoringu ryb i środowiska ekosystemów jeziornych. W: *Ochrona i rekultywacja jezior*, (eds) R. Wisniewski i J. Jankowski, Grudziądz, str. 33-42
- **Godlewska M.** Świerzowski A., Winfield I. J. (2004) Hydroacoustics as a tool for studies of fish and their habitat. *Ecohydrology & Hydrobiology* 4: 417-427
- **Godlewska M.**, Andrzej Świerzowski (2003) Hydroacoustical parameters of fish in reservoirs with contrasting levels of eutrophication. *Aquatic Living Resources*, 16/3: 167-173

- **Godlewska M.**, Mazurkiewicz-Boroń G., Pocięcha A., Wilk-Woźniak E., Jelonek M. (2003) Effect of the Flood on the Functioning of the Dobczyce Reservoir Ecosystem. *Hydrobiologia*, 504: 305-313
- Świerzowski A, **Godlewska M.** (2003) *In situ* measurements of the target strength of Vendace (*Coregonus albus* L) in Lake Pluszne. *Hydroacoustics* 6: 59-68
- **Godlewska M.**, Wilk-Woźniak E. (2003) XIX Zjazd Hydrobiologów Polskich (Warszawa, 9-12 IX 2003 r.) *Wiad. Ekol.* 49, 4:305-310
- **Godlewska M.**, Mazurkiewicz-Boroń G., Pocięcha A., Wilk-Woźniak E., Jelonek M. (2002) Effect of the Flood on Fish, zooplankton, Phytoplankton and the Water Quality in the Dobczyce Reservoir, Poland. 4th International Conference on Reservoir Limnology and Water Quality. Ceske Budejovice, Czech Republic, August 12-16, 2002, Extended Abstracts, p. 102-105
- **Godlewska M.** (2002) The Effect of Fish Migrations Patterns on the Acoustical Estimates of Fish Stocks. *Acta Acustica united with Acustica*, 88:748-751
- **Godlewska M.**, Górska N., Klusek Z., Szczucka J., Świerzowski A., Tęgowski J. (2002) Hydroacoustics as a tool for monitoring the quality of aquatic ecosystems. *Ecology and Ecotechnologies, Proceedings of the Review Conference on the scientific cooperation between Austria and Poland, February 24-28, 2002, Scientific Centre of the Polish Academy of Sciences, Vienna, Austria, vol. 2: 287-295*
- **Godlewska M.** The Effect of Fish Migration Pattern on the Acoustical Estimates of Fish Stocks in Inland Waters. *Proceedings of the 6-th European Conference on Underwater Acoustics ECUA 2002, A. Stepnowski, R. Salamon, A. Partyka (eds), 24-27 June 2002, Gdańsk, Poland, pp. 447-450*
- **Godlewska M.**, Jelonek M. (2001) The effect of littoral on the day/night fish abundance estimates by hydroacoustics. *Proceedings of the 17th International Congress on Acoustics vol. 3: 72-73*
- Kalinowski J., Azzali M., **Godlewska M.**, Lanciani G. (2001) Krill vertical migrations in the Ross Sea. *Proceedings of the 17th International Congress on Acoustics vol. 3: 42-43*
- Godlewska M., Świerzowski A. (2001) Fish abundances and size structure distributions in reservoirs with different trophy level. *Hydroacoustics* 4: 65-68
- Świerzowski A., **Godlewska M.** (2001) The effect of the seasonal changes of environment on the hydroacoustically monitored spatial distribution and density of vendace (*Coregonus albus* L.) in Pluszne lake. *Hydroacoustics* 4:231-236
- Świerzowski A., **Godlewska M.** (2001) Effects of hydropower plants activities on fish population, abundance and distribution. *Archives of Polish Fisheries*, 9:157-172
- Godlewska M., Maciej Zalewski (2001) Hydroacoustics as a tool for studying the impact of habitat modification (degradation) upon fish: a review. *Ecohydrology and Hydrobiology*, 1 (3): 393-399
- Świerzowski A., **Godlewska M.**, Pótorak T. (2000) The relationship between the spatial distribution of fish, zooplankton and other environmental parameters in the Solina reservoir, Poland. *Aquatic Living Resources* 13, 5: 373-377
- **Godlewska M.**, Pótorak T., Świerzowski A. (2000) Relationship between spatial fish distribution measured acoustically and the environmental variability in Solina reservoir" *Proceedings of the Fifth European Conference on Underwater Acoustics. Editor: M.E Zakharia, co –editors:P.Chevret.P.Dubail, Lyon, France, 1509-1513*
- **Godlewska M.**, Pótorak T., Świerzowski A. (2000) Hydroacoustical estimation of fish abundance and distribution in the Solina reservoir. *Hydroacoustics Vol.3 E. Kozaczka and G.Grelowska (Editors) Naval Academy, Gdynia., 173-177*
- Pótorak T., **Godlewska M.**, Mienszutkin W., Mienszutkina N. (2000). Wybrane parametry fizyczne, chemiczne i biologiczne a przestrzenne rozmieszczenie ryb w Zbiorniku Solińskim. *Materiały zjazdowe, XVIII Zjazd Hydrobiologów Polskich w Białymstoku, Szacunek dla wody, str 210 (abstrakt)*
- Jelonek M., **Godlewska M.** (2000) Ichthyofauna. In: Starmach J. and Mazurkiewicz-Boroń G. (ed.) *Dobczyce reservoir: ecology-eutrophication-protection (in Polish),. ZBW PAN, p. 137-148*

Organisational memberships

- Scientific Council of the International Centre for Ecology PAS
- Scientific Council of the Inland Fisheries Institute
- Polish Acoustical Society

- Polish Hydrobiological Society