

Social-ecological fisheries science



Prof. Dr. Robert Arlinghaus

Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB) in the Forschungsverbund Berlin e.V. (FVB) & Humboldt-Universität zu Berlin

Research focus

Human dimensions and bio-economics of recreational fisheries, inter- and transdisciplinary fisheries research, fish and fisher behavioural ecology

1. Contact

Department of Biology and Ecology of Fishes, IGB, Müggelseedamm 310, 12587 Berlin & Division of Integrative Fisheries Management, Faculty of Life Sciences and Integrative Research Institute on Transformations of Human-Environment Systems, Humboldt-Universität zu Berlin, Philippstrasse 13, Haus 7, 10115 Berlin, Germany: arlinghaus@igb-berlin.de

2. Websites

Personal web: www.ifishman.de
Google Scholar: www.scholar.google.com/citations?user=Slto_gcAAAAJ&hl=en
Research Gate: www.researchgate.net/profile/Robert_Arlinghaus

3. Education

2004: PhD in Agricultural Sciences with a speciality in the Human Dimensions of Fisheries, Humboldt-Universität zu Berlin.

2000: Master in Science in Ichthyology, Humboldt-Universität zu Berlin.

4. Appointments

2013 – today: Professorship (W-2-S) for Integrative Fisheries Management at Faculty of Life Sciences, Humboldt-Universität zu Berlin & Senior Scientist for Inland Recreational Fisheries at IGB

2006 – 2012: Junior-Professorship (W-1-S) for Inland Fisheries Management at Faculty of Agriculture and Horticulture, Humboldt-Universität zu Berlin

2004 – 2006: Post Doc for Inland Fisheries at IGB

5. Externally funded research projects (selection)

2016 – 2022 Baggersee: Improving ecosystem services generated by gravel pit lakes through good managerial practice, BMBF PI

2015 – 2018 Impress: Improved production technological for the restoration of migratory freshwater species, EU Horizon 2020, ITN, PI.

2014 – 2016 SalmoInvade: Causes and consequences of invasions of ecosystems by salmonids, PanEuropean BiodivERSA, German Science Foundation, PI

2013 – 2015: BTypes: Ecological and managerial consequences of fish behavioural types, Leibniz-Competition, PI

2010 – 2014: Besatzfisch: Fish stocking and aquatic biodiversity conservation from an inter- and transdisciplinary perspective, German Ministry for Education and Research, leader of young research group and PI

Cumulative grant income: > 9 million €

5. Three important scientific discoveries and associated papers	<ul style="list-style-type: none">• Size-selective mortality induces phenotypic and genetic changes in exploited fish stocks (Uusi-Heikkilä et al. 2015, <i>Evol. Appl.</i> 8:597-620)• Optimal harvest regulations are strongly dependent on explicitly including dynamic responses of fishers to ecological and managerial changes (Johnston et al. 2010, <i>CJFAS</i> 67:1507-1531)• Fish behavioural types consistent with personality exists in a wild population of fish, the example of northern pike (Kobler et al. 2009, <i>Oecologia</i> 161:837-847)
6. Teaching	<p>Current (Masters of Fish Biology, Fisheries & Aquaculture, Humboldt-Universität zu Berlin)</p> <ul style="list-style-type: none">• Integrative fisheries science & management• Sampling and data analysis in fisheries science
7. Scientific service	<p><u>Organization of Conferences & Symposia (selection)</u></p> <p>2017: Human Dimensions of Recreational Fisheries, 8th World Recreational Fishing Conference in Victoria, Canada</p> <p>2014: Symposium on recreational fisheries as complex adaptive system at SESYNC, USA</p> <p>2014: Co-Convenor FSBI Annual Meeting in Hull, UK</p> <p>2011: Organizer and Chair of the 6th World Recreational Fishing Conference held at Humboldt-Universität zu Berlin in August 2011 (300 attendees of 33 countries)</p> <p>2011: Organizer of Symposium on Fish Stocking held at the American Fisheries Society Conference.</p> <p>2008: Co-organizer of Human Dimensions of Fish and Wildlife Management Conference 2008 in Colorado</p> <p><u>Key notes (selection)</u></p> <p>Arlinghaus, R., Riepe, C., Pagel, T., Beardmore, B., Hilberg, J. 2014. Social and economic dimension of fish stocking. 2014 Annual Symposium of The Fisheries Society of the British Isles, 7.-14. July 2014. Hull, UK.</p> <p>Arlinghaus, R., Riepe, C. 2014. Social value change and sustainable fisheries. Key Note at 7th World Recreational Fishing Conference, 1.-4. September 2014, Campinas, Brazil.</p> <p>Arlinghaus, R., Johnston, F., Matsumura, S. 2010. Managing recreational fisheries with heterogenous anglers. Key Note at International Conference on the Dynamics of Inland Fisheries: Towards a synthesis of objectives, models and data analysis for sustainable management, 15.09.2010, Cjeske Budejovice, Czech Republic.</p> <p>Arlinghaus, R. 2009. Social-ecology of natural resource use to manage for sustainability: examples from recreational fishing. Key Note at 15th International Symposium on Society and Resource Management, July 2009, Vienna.</p> <p>Arlinghaus, R. 2008. Fish welfare and recreational fishing. Key Note at</p>

Fish Welfare Symposium, 5th World Fisheries Congress, 20.-24.10.2008, Yokohama, Japan.

Review activities (selection)

Journals:

Aquatic Sciences, Animal Behaviour, Ambio, Biology Letters, Canadian Journal of Fisheries and Aquatic Sciences, Ecology, Ecological Applications, Evolutionary Applications, Environmental Management, Fisheries, Fisheries Management and Ecology, Journal of Fish Biology, Land Economics, Limnologica, Leisure Sciences, Human Dimensions of Wildlife, North American Journal of Fisheries Management, Plos One, Transactions of the American Fisheries Society, PNAS

Granting bodies:

BMBF, DFG, DAAD, German Environmental Foundation, Germany Committee for Science in Germany, international: NSF in the USA, NSERC in Canada, Finnish Academy of Sciences, Norwegian Academy of Sciences, Romanian Academy of Sciences, European Research Council, pool or reviewers for biodiversa calls

Structural activities:

2015 - 2016: Foundation of the Virtual Centre for the Reality Mining of Animal-Human Systems within strategic partnership of Princeton University and Humboldt-Universität zu Berlin

2010 – 2011: Consultant and Lead Author of the Technical Guidelines for Responsible Fisheries: Recreational Fisheries for FAO in Rome

8. Student supervision

BSc (19 completed, 1 ongoing), MSc (25 completed, 2 ongoing), PhD (9 completed, 3 ongoing), Post-docs (6 completed, 3 ongoing).

9. Awards

2016: Cultura-Prize by Töpfer Foundation

2014: Award by German UNESCO Commission for outstanding project on Education for Sustainable Development

2012: Medal by FSBI for a young scientist < 40 for exceptional advancements in fish science

2008: Award of Excellence in Fisheries Management, American Fisheries Society, Fisheries Management Section

2007: Elected into the Young Elite of 40 young researchers younger than 40 in Germany by Capital

2006: Teaching Award by the Faculty of Agriculture and Horticulture for best evaluated lecture

2006: Dream-Team of German Young Scientists (Stifterverband and Bild der Wissenschaft)

2005: Nomination for René Descartes Award in Science Communication by the EU

2004: Leibniz-Young Researcher Award for outstanding doctoral thesis

2004: Albrecht-Daniel-Thaer Dissertation Award

2004: Bscher-Media Award for excellence in popular science

communication

2003: „Writer of the Year“ by 1000 readers of the angling magazine „Carp Connect“

2001: Humboldt-Preis for outstanding master thesis

2001: Award by VDFF for master thesis “particularly beneficial for German fisheries”

2001: Award by Ministry for Agriculture, Environment and Rural Planning of Brandenburg for outstanding masters thesis

10. Papers

Summary statistics

Number of peer-reviewed papers: 190

Total volume of published items: 453

Books, edited volumes: 18

Number of citations: 7.900 citations (Google Scholar)

H-index: 49 (Google Scholar)

10 Most important publications (for all, see weblinks above, last position indicates group leader)

1. Fujitani, M., A. McFall, C. Randler, **R. Arlinghaus**. 2017. Participatory adaptive management leads to environmental learning outcomes extending beyond the sphere of science. *Science Advances*, 3, e1602516
 2. Uusi-Heikkilä, S., A. R. Whiteley, A. Kuparinen, S. Matsumura, P. A. Venturelli, C. Wolter, J. Slate, C. R. Primmer, T. Meinelt, S. S. Killen, D. Bierbach, G. Poverino, A. Ludwig, **R. Arlinghaus**. 2015. The evolutionary legacy of size-selective harvest extends from genes to populations. *Evolutionary Applications*, 8:597-620.
 3. Gwinn, D.C., M.S. Allen, F.D. Johnston, P. Brown, C.R. Todd, **R. Arlinghaus**. 2015. Rethinking length-based fisheries regulations: the value of protecting old and large fish with harvest slots. *Fish and Fisheries*, 16:259-281.
 4. Sutter, D.A.H. C.D. Suski, D.P. Philipp, T. Klefoth, D.H. Wahl, P. Kersten, S.J. Cooke, **R. Arlinghaus**. 2012. Recreational fishing selectively captures individuals with the highest fitness potential. *PNAS*, 109:20960-20965.
 5. van Poorten, B.T., **Arlinghaus, R.**, Daedlow, K., Haertel-Borer, S.S. 2011. Social-ecological interactions, management panaceas, and the future of wild fish populations. *PNAS*, 108:12554-12559.
 6. Johnston, F. D., **Arlinghaus, R.**, Dieckmann, U. (2010). Diversity and complexity of angler behaviour drive socially optimal input and output regulations in a bioeconomic recreational-fisheries model. *Canadian Journal of Fisheries and Aquatic Sciences*, 67:1507-1531
 7. Jørgensen, C., Enberg, K., Dunlop, E. S., **Arlinghaus, R.**, Boukal, D. S., Brander, K., Ernande, B., Gårdmark, A., Johnston, F., Matsumura, S., Pardoe, H., Raab, K., Silva, A., Vainikka, A., Dieckmann, Heino, M., Rijnsdorp, A. D. 2007. Managing evolving fish stocks. *Science*, 318:1247-1248.
 8. **Arlinghaus, R.**, Cooke, S. J., Lyman, J., Policansky, D., Schwab, A., Suski, C., Button, S. G., Thorstad, E.B. (2007). Understanding the complexity of catch-and-release in recreational fishing: an integrative synthesis of global knowledge from historical, ethical, social, and biological perspectives. *Reviews in Fisheries Science*, 15:75–167
-

-
9. **Arlinghaus, R.** 2006. On the apparently striking disconnect between motivation and satisfaction in recreational fishing: the case of catch orientation of German anglers. North American Journal of Fisheries Management 26: 592–605.
 10. **Arlinghaus, R.** (2006). Der unterschätzte Angler. Kosmos, Stuttgart, 168 S.

Most important media reactions (past five years)

Der Spiegel, Spiegel Online, Die Zeit, Die Welt, Süddeutsche Zeitung, Berliner Zeitung, Berliner Morgenpost, Tagesspiegel, Hamburger Abendblatt, Rheinpfalz am Sonntag, Rheinische Post, Neues Deutschland, Hannoversche Allgemeine, Chrismon, Der Standard, Stuttgarter Nachrichten, Telegraph, Neue Züricher Zeitung am Sonntag, Bild der Wissenschaft, Geo-Magazin, Greenpeace Magazin, ARD, rbb, WDR 5, Deutschlandradio, Deutschlandfunk, NDR Fernsehen, MDR
