FIThydro

European Stakeholder Workshop on Fish-Friendly Hydropower

28-29 January 2020, Brussels

Venue: Herman Teirlinck building of the Flemish Government, Havenlaan 88, 1000 Brussels

Day 1, 28 January 2020

Time	Agenda point
11:00	Registration / Lunch snack
Introduction (moderation: Johan Coeck, Research Institute for Nature & Forest)	
12:00	Introduction to FIThydro & aims of workshop *Peter Rutschmann, Technical University of Munich & Eleftheria Kampa, Ecologic Institute*
Session I: Science meets Management and Policy – Challenges and opportunities for hydropower (moderation: Thomas Schleker, DG RTD)	
12:15	Hydropower research and Innovation: The European viewpoint *Thomas Schleker, DG Research and Innovation*
12:30	Challenges for hydropower at the interface of different policies *Johan Kling, Swedish Agency for Marine and Water Management*
12:50	Hydropower, rivers and fish ecology *Colin Bean, University of Glasgow*
13:10	New EU guidance on the ecological potential of heavily modified water bodies impacted by hydropower *Jeanne Boughaba, DG Environment, Water Unit*
13:25	Requirements for hydropower in relation to the Habitats and Birds Directives (Natura 2000) *Christina Pantazi, DG Environment, Nature Protection Unit*
13:40	Discussion
13:50	Coffee Break
Session II: Risk assessment & decision-support tools for hydropower plants (moderation: Martina Bussettini, Italian National Institute for Environmental Protection and Research)	
14:20	Risk classification system for fish species *Christian Wolter, Leibniz-Institute of Freshwater Ecology and Inland Fisheries*
14:35	Assessment of cumulative impacts *Ian Cowx, University of Hull*
14:50	Knowledge sharing on tools for planning, implementing and monitoring mitigation measures *Atle Harby and Bendik Hansen, SINTEF*
15:05	Risk-based Decision Support System for hydropower plants *Richard Noble, University of Hull*
15:20	Short introduction to parallel discussion groups
15:25	Short break on the way to the discussion group rooms

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15:40	**Parallel discussion groups**
	<u>Group 1:</u> Tools for risk assessment and impact assessment (moderators: Ian Cowx, University of Hull & Christian Wolter, Leibniz-Institute of Freshwater Ecology and Inland Fisheries) Short presentations: - The AMBER Barrier Atlas: an overview of stream fragmentation in Europe (Carlos Garcia de Leaniz, Swansea University), 5-7 min - Hydropower pressure on European rivers (Claire Baffert, WWF European Policy Office), 5-7 min - Application example of Fish Population Hazard Index (Christian Wolter, Leibniz-Institute of Freshwater Ecology and Inland Fisheries), 5-7 min - Application example of Cumulative Impact Assessment tool (Ian Cowx, University of Hull), 5-7 min
	<u>Group 2:</u> Measures selection using the FIThydro Decision-Support System and wiki (moderators: Richard Noble, University of Hull & Atle Harby, SINTEF) Short presentations: - Prioritizing between environmental measures (Elin Hellmér, Swedish energy research center - Energiforsk), 5-7 min - Hands-on demonstration of FIThydro wiki (Bendik Hansen, SINTEF), 5-7 min - Application example of the Decision-Support System (Richard Noble, University of Hull), 10 min
17:40	Coffee break on the way back to plenary
18:10	**Feedback from parallel discussion groups (moderation: Johan Coeck, Research Institute for Nature & Forest)** - Group 1 - Group 2
18:30	Reception at the venue and end of Day 1

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Day 2, 29 January 2020

Time	Agenda point
Session III: Cost-effective and applicable solutions for key impacts from hydropower plants (moderation: Robert Boes, ETH Zürich)	
9:00	Welcome & introduction to Day 2
9:05	Cost-effective and applicable solutions for hydropower impacts on downstream migration *Ismail Albayrak, ETH Zürich*
9:20	Flow regime at hydropower plants: Ecological needs and methodological approaches *Martin Schletterer, TIWAG-Tiroler Wasserkraft AG*
9:35	Sensor Networks, Fish Robots and Virtual Turbines: Advancing Sustainable Innovation for Hydropower *Jeffrey Tuhtan, Tallinn University of Technology*
9:50	Coffee break on the way to the discussion group rooms
10:20	**Parallel discussion groups**
	Group 1: Solutions for downstream migration (moderators: Laurent David, CNRS & Robert Boes, ETH Zürich) Short presentations: - Key problems on downstream migration & FIThydro solutions (Laurent David, CNRS), 10 min - Fish protection by fish guidance rack-bypass systems (Robert Boes, ETH Zürich), 5-7 min - Adaptive weir management for safe downstream migration of European Eel (Cornelia Häckl, Uniper), 5-7 min
	Group 2: Solutions for impacts related to hydropeaking (moderators: Atle Harby, SINTEF & Martin Schletterer, TIWAG-Tiroler Wasserkraft AG) Short presentations: - Key problems on hydropeaking & FIThydro solutions with focus on the Hydropeaking Tool (Atle Harby, SINTEF), 10 min - Monitoring of mitigation measures for hydropeaking in the Hasliaare (Steffen Schweizer, Kraftwerke Oberhasli AG), 5-7 min - Lateral fish shelters in river banks as an innovative measure for hydropeaking mitigation and river restoration (Anton Schleiss, EPFL-ICOLD), 5-7 min
	Group 3: New diagnostic Methods, Tools and Devices (MTDs) (moderators: Antonio Pinheiro, University of Lisbon & Jeffrey Tuhtan, Tallinn University of Technology) Short presentations: - Introduction to new diagnostic MTDs of FIThydro & challenges they address (Antonio Pinheiro, University of Lisbon & Jeffrey Tuhtan, Tallinn University of Technology), 10 min - Concept for the development of fish passage facility using ADCP, numerical modelling and fish monitoring (Ismail Albayrak, ETH Zürich), 5-7 min - Bi-O-Rhône: an innovative method for fish population monitoring in hydropower plant reservoirs: Edna & echolocation /echosounding (Franck Pressiat, Compagnie Nationale du Rhone), 5-7 min
12:15	Lunch
13:15	**Feedback from parallel discussion groups (moderation: Robert Boes, ETH Zürich)** - Group 1 - Group 2 - Group 3

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Session IV: Collaboration between science, industry and public for supporting fish-friendly hydropower (moderation: Robert Fenz, Austrian Federal Ministry for Sustainability and Tourism)	
13:45	Added value of collaboration between scientists and hydropower operators in current and future projects *Cornelia Häckl, Uniper*
14:00	Interaction between operators and local communities: The Anundsjö case in Sweden *Kordula Schwarzwälder, Norwegian University of Science and Technology*
14:15	Lessons learned on public acceptance of hydropower and hydropower technologies *Mandy Hinzmann, Ecologic Institute*
14:30	Discussion
Closing session	
14:45	Closing remarks *Peter Rutschmann, Technical University of Munich*
15:00	End of workshop

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