

June 2006



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EUROPEAN INLAND FISHERIES ADVISORY COMMISSION

SYMPOSIUM ON HYDROPOWER, FLOOD CONTROL AND WATER ABSTRACTION: IMPLICATIONS FOR FISH AND FISHERIES

Mondsee, Austria, 14-17 June 2006

PROVISIONAL AGENDA AND TIMETABLE

CHAIRMAN: Wolfgang Stalzer, Vienna, Austria

CONVENER: Robin Welcomme, Stocke by Clare, UK

TECHNICAL SECRETARY: Gerd Marmulla, FAO

VENUE: Conference Centre at the Mondsee Palace, Mondsee, Austria

Wednesday, 14 June 2006

- 08.00-09.00 Registration
- 09.00-09.30 Symposium opening and welcome addresses
- Session 1 – Assessment of Issues and Impacts*
Chair: S. Schmutz
- 09.30-09.50 Status of hydropeaking in Switzerland with a special focus on the Rhone River
Peter, A., Meile, T., Fette, M. & Baumann, P.
- 09.50-10.10 Regulated discharge produces severe effects on fish community in the grayling zone of a small salmonid stream
Ovidio, M., Capra, H., Orban, P. & Philippart, J.C.
- 10.10-10.30 Winter mobility patterns of juvenile Atlantic salmon in relation to turbulence and ice information in a regulated river
Enders, E.C., Stickler, M., Pennel, C.J. Alfredsen, K. & Scruton, D.A.
- 10.30-11.00** Coffee/tea break

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- 11.00-11.20 Effect of flow regulation on the distribution of fish abundance and biomass; comparison of cascade and non cascade reservoirs
Draštík, V., Kubečka, J. & Tušer, M.
- 11.20-11.40 The effect of the construction of artificial reservoir on the fish population in the inflowing river
Hladík, M. & Kubečka, J.
- 11.40-12.00 Entrainment and damage of young-of-the-year fish by the power station on the Dyje River, Czech Republic
Janáč, M., Jurajda P., Prášek, V. & Kružiková, L.
- 12.00-12.20 Influence of the Wloclawek dam on migratory fishes in the Vistula River
Bartel, R., Wiśniewolski, W. & Prus, P.
- 12.20-14.00 Lunch**
- 14.00-14.20 Influence of exploitation of electropower stations on structure of fish population in the upper Dunajec River (South Poland)
Augustyn, L. & Bartel, R.
- 14.20-14.40 Reservoirs fisheries in Turkey
Tüfek, Ö.M.
- 14.40-15.00 Impacts of flood control schemes in Bangladesh and guidelines for mitigation
Halls, A.
- 15.00-15.20 Effects of hydro power operation and other pressures on fish in Austrian Rivers MIRR – a model-based instrument for river restoration in Austria
Melcher, A., Zitek, A., Poppe, M. Muhar, S., Jungwirth, M. & Schmutz, S.
- 15.20-15.40 Assessment of hydropower, flood control and water abstraction impacts on fish and fisheries: a session summary
Schmutz, S.
- 15.40-16.10 Coffee/tea break**
- Session 2 – Rehabilitating and Mitigating Mechanisms**
Chair: Armstrong, G.
- 16.10-16.30 Mitigating impacts of water infrastructure on fish movements: a Canadian perspective
Katopodis, C.
- 16.30-16.50 Weir Removal in salmonid streams: implications, challenges and practicalities in the Iberian Peninsula
Garcia de Leaniz, C.
- 16.50-17.10 Re-establishing connectivity in a Danube-tributary system
Zitek, A., Schmutz, S. & Jungwirth, M.
- 17.10-17.30 Provision of upstream fish passage by means of nature-mimicking fish passes
Redeker, M.
- 17.30-17.50 Development of new dimensioning specifications for fish passage structures with perturbation boulders
Heimerl, S. & Wurster, H.

17.50-18.10 Discussion
Armstrong, G.

19.30 Welcome reception by the minister of Agriculture and Forestry, Environment and Water Management and the Governor of Upper Austria

Thursday, 15 June 2006

Session 2 (cont'd) – Rehabilitating and Mitigating Mechanisms

08.30-08.50 Fish passage experience at small-scale hydro powerplant in France
Larinier, M.

08.50-09.10 Mitigating the effects of high head dams on the Columbia River, USA: experience from the trenches
Williams, J.G.

09.10-09.30 Fish Passage and Hydroelectricity: A Synopsis of Comprehensive Studies of Upstream and Downstream Passage of Anadromous Wild Atlantic Salmon, *Salmo Salar*, on the Exploits River, Canada
Scruton, D.A., Pennell, C.J., Bourgeois, C.E., Goosney, R.F., Porter, T.R., Ollerhead, L.M.N., Clarke, K.D., Booth, R.K. & Eddy, W.

09.30-09.50 Fish behaviour and passage efficiency: lessons from North America
Kemp, P.S., Gessel, M.H. & Williams, J.G.

09.50-10.10 Advances in intake and outfall fish screening
Turnpenny, A.

10.10-10.30 Strategy for the mitigation of the effect of the Kuban River flow regulation on sturgeon reproduction
Chebanov, M.S., Galich, E.V. & Ananyev, D.V.

10.30-11.00 Coffee/tea break

11.00-11.20 Study on upstream and downstream migration facilities at the Sieg River - technical solutions, efficiency of upstream migration, total mortality of downstream migration, costs and energy loss at hydro power stations
Dumont, U.

11.20-11.40 Rotation screen prevents fish damage in hydroelectric power stations
Hartvich, P., Dvořák, P. & Vrána, P.

11.40-12.00 Ecological and behavioural background of constructions facilitating migrations and preventing mass loss of fish in regulated rivers
Pavlov, D.S., Lupandin, A.I. & Mikheev, V.N.

12.00-12.20 Behavioural patterns of Iberian Barbels' upstream movements through an artificial pool-type fishway
Silva, A.T., Franco, A.C., Santos, J.M., Ferreira, M.T., Pinheiro, A.N., Melo, J.F. & Bochechas, J.H.

12.20-14.00 Lunch

14.00-14.20 The restoration of unobstructed fish migration within a "heavily modified water body", example of the lower River Ruhr
Jäger, S.

- 14.20-14.40 Improvement of the effect of fishways by leading currents and the design of structures in the River Channel
Kraetz, D., Voelker, J. & Hassinger, R.
- 14.40-15.00 An experimental and numerical study of turbulent flow in vertical slot fishways
Tarrade, L., Texier, A., David, L., Larinier, M. & Manceau, R.
- 15.00-15.20 The use of a portable fishway to test the swimming ability of migrating fish in rivers
Kotze, P.J., Ross, M.J., Deacon, A.R. & Niehaus, B.H.
- 15.20-15.40 The canoe-fishway - a combination of fish migration and canoe passage in the same channel
Hassinger, R.
- 15.40-16.10 Coffee/tea break**
- 16.10-16.30 River rehabilitation for fish in central Italy: the River Panaro project
Pini Prato, E., Ferri, M., Comoglio, C., Gianaroli, M., Marconato, E., Maio, G., Larinier, M. & Marmulla, G.
- 16.30-16.50 Effects of hydropower installations and associated river regulation on River Shannon eel populations: historical perspectives, fishery management responses and current research objectives
McCarthy, T.K., Cullen, P., Blaszkowski, M., O'Connor, W., Doherty, D., & Frankievich, P.
- 16.50-17.10 Eel protection measures within the manapouri hydro-electric power scheme, South Island, New Zealand
Boubée, J., Jellyman, D. & Sinclair, C.
- 17.10-17.30 Evaluation of surface and bottom bypasses to protect eel migrating downstream at small hydroelectric facilities in France
Travade, F., Larinier, M., Gosset, C., Durif, C., Rives, J. & Elie, P.
- 17.30-17.50 Facilities for upstream migration of eels and elvers at man-made obstructions
Solomon, D.
- 17.50-18.50 **Poster Session**

Friday, 16 June 2006

Session 3 – Environmental Flow Criteria; Methodology and Practice

Chair: Cowx, I.

- 09.00-09.30 Living without water: establishing environmental flows for fish
Noble, R.A., Cowx, I.G. & Welcomme, R.
- 09.30-09.50 What is sufficient water flow in strongly regulated salmon rivers?
Johnsen, B.O. & Hvidsten, N.A.
- 09.50-10.10 Regionalisation of instream flow results in Tiber basin
La Porta, G., Spigonardi, M.P., Lorenzoni, M. & Mearelli, M.
- 10.10-10.30 Environmental effects of 'hydropeaking' power generation: experimental studies of response of juvenile salmon and trout to flow modification
Scruton, D.A., Pennell, C., Ollerhead, L.M.N., Robertson, M., Clarke, K.D., Alfredsen, K., Strickler, M., Harby, A. & LeDrew, L.J.

10.30-11.00 Coffee/tea break

- 11.00-11.20 Dam operation rules based on brown trout flow requirements: design of environmental flow regimes in regulated streams
Alonso-González, C., Gortázar, J., Baeza Sanz, D., & García de Jalón, D.
- 11.20-11.40 A case study for the determination of the D.M.V.(Minimum Flow Released) on biological basis for a new artificial basin
Nocita, A., Pini, G., Bartali, S., Pini Prato, E. & Schweizer, S.
- 11.40-12.00 Approaches for setting ecological flows: a Canadian perspective
Katopodis, C.
- 12.00-12.20 Assessing and validating environmental flows in Austrian rivers
Unfer, G., Zeiringer, B., Jungwirth, M. & Schmutz, S.

12.20-14.00 Lunch**Session 4 – Social, Economic, Conservation and Legal Issues**

Chair: Castelnaud, G. & Brenner, T.

- 14.00-14.20 Examples from the Danish management scene: Migratory fish and river obstacles
Jepsen, N. & Rasmussen, G.
- 14.20-14.40 Fishes as promoters for new approaches in integrative river management
Jungwirth, M., Muhar, S., Schmutz, S. & Unfer, G.
- 14.40-15.00 Priority list for re-establishing the river continuity in Austrian rivers
Mader, H., Maier, C.
- 15.00-15.20 Strategies for the conservation of endangered fish communities affected by flow regulation and increasing urbanization. application to River Perales Basin (Spain)
Marchamalo, M., Alonso, C., Baeza, D., Vizcaino, P., & García de Jalón, D.
- 15.20-15.40 Experiences from across the pond: Modelling downstream migration and survival of juvenile pacific salmon through the Columbia River hydropower system
Zabel, R.W.
- 15.40-16.10 Coffee/tea break**
- 16.10-16.30 Atlantic salmon in the regulated River Alta: Changes in juvenile and adult abundance
Næsje, T.F., Thorstad, E.B., Ugedal, O. & Forseth, T.
- 16.30-16.50 Atlantic salmon in the regulated River Alta: effects of changed environmental conditions during winter on juvenile salmon
Ugedal, O., Finstad, A.G., Forseth, T., Thorstad, E.B. & Naesje, T.F.
- 16.50-17.10 How to operate a power station in a sensitive river: challenges and experiences
Tvede, A.

17.10-17.30 Legislation and experience in assessment the hydropower impact on fisheries in Latvia
Mitans, A.

17.30-17.50 A legal framework for granting public financial aid, to construct new or modernize existing fish passes in Poland
Stachowiak, P.M.

17.50-18.50 **Poster Session**

Saturday, 17 June 2006

Session 5 – Conclusions and Recommendations

Chair: Welcomme, R.

09.00-13.00 Presentation of Symposium report