

Preliminary programme

Sustainable hydropower - strategic planning, measures and
governance

June 12-14, 2019

Storforsen, Vidsel, Sweden

Jun 12

10.30 Transfer from Luleå City

11.00 Transfer from Luleå Airport

Registration

12.00-13.30 Lunch and registration

Welcome and introduction

There are several hundred thousand of barriers and transverse structures in European rivers. A majority of the river water bodies in are classified to moderate or worse ecological status due to hydromorphological pressures. To reach good ecological status on a general level there are essentially three key type of measures, improving continuity, improving physical habitats and implementing ecological flows. However, hydromorphological pressures are in many cases a result of important societal services such as hydropower, agriculture and infrastructure. It is therefore crucial to maximize the environmental improvements and at the same time secure the benefits from abiotic services such as hydropower. The process will be very extensive and costly, which requires, a good planning and prioritization on all scales from catchment level to national level. Application of “best” available technology and a knowledge-based governance also need to be adaptable to outcomes and changing conditions, like climate change.

13.30-13.40 Welcome by the County Director Johan Antti

13.40-13.50 Welcome by Director General Jakob Granit

13.50-14.30 Sustainable hydropower, European perspective. Peter KRISTENSEN, Project Manager on Integrated Water Assessment at the European Environment Agency (EEA)

Planning

There has been a rapid expansion in river restoration/rehabilitation projects in industrialised countries in an effort to improve degraded habitats and ecological conditions. Within EU, the implementation of the EU water framework directive have resulted in the recognition of hydromorphological pressures as the major pressure on European waters causing degraded habitats and weakened ecosystems. This is due to hundreds of thousands of dams, locks, weirs, storage reservoirs and other types of man-made physical alterations distributed all over Europe. However many of these pressures represent other public values and delivers important services to the Society. The scale of the challenge and the complexity of the solutions makes extensive planning a necessity.

To tackle this, we need to ask, which are the most important elements of planning? How can planning ensure good environmental qualities while preserving other essential values and services? What level of planning is necessary and what are the prerequisites for successfully planning?

14.30-15.15 Essentials for planning successful improvement of environmental values while securing the benefits of hydropower production. Ian G. Cowx, Hull International Fisheries Institute, School of Environmental Sciences, University of Hull

15.15-15.45 Coffee

15.45-16.15 Russian water codex, TBC

16.15-16.45 Finnish strategy for fish migration. TBC

16.45-17.15 The Swedish national Plan for sustainable hydropower. Mats Svensson, SWAM

17.15-17.30 Closing by Director General Björn Risinger, Swedish Environmental Protection Agency

17.30-18.30 Walk to Storforsen rapids and bus back

18.30-19.30 Poster session including a presentation och China Europe Water Platform and refreshments

19.30 Dinner

Jun 13

Measures

There has been a notably increase in measures with aim of restoring/rehabilitating lakes, rivers and streams affected by hydropower during the last 20 years. In Europe, this development has been reinforced by the implementation of the Water framework directive. However, experiences from applied measures does not always provide the results we expected. For example, regional analysis in Sweden on the functions of installed fishways indicate an efficiency of only just above 50 % and results from other countries indicates that the response time of the ecosystems might be years or even decades. To apply the best available measures we need to work on an appropriate scale including upstream and downstream processes and to have an understanding of the coupling between hydromorphological pressures, physical processes and habitat degradation. We also need appropriate tool to monitor the improvements. Decision support may be required to apply available methods and restoration/rehabilitation techniques.

How do we apply proper measures at the right location? What is the prerequisites for finding successful measures? Do we have a common understanding about best available technology (BAT) and how it should be applied? What scale is appropriate? How to sequence and prioritise measures?

08.30- 09.15 The smorgasbord of environmental measures and emerging best available technology (to mitigate ecological impacts). Jo Halvard Halleraker, Norwegian Environment Agency

09.15-09.45 Mitigation measures in the Swedish hydropower – experiences and conclusions, Erik Sparrevik, Vattenfall, Johann Kling SWAM

09.45-10.15 Downstream migration, technique and experiences, Olle Calles
Karlstad University

10.15-10.45 Coffee

10.45-11.15 Energiforsk research programme on sustainable Hydropower. Elin
Hellmér, Energiforsk

11.15-11.45 Increased hydropower production and salmon production, Atle
Haby, SINTEF

12.00 Departing for excursion

13.00-14.00 Lunch in Nybyn, including presentation about the fishway in
composite, Göran Svahn Composite Services

14.00-18.30 Excursion, including visit to hydro power stations att Sikfors and
Lillpite.

1830 Return to Storforsen hotel

19.00 Dinner

June 14

Governance

Governance comprises the processes of governing a social system, wether it is a government agency, a market or NGO, through laws, norms or objectives. Often successful governance is expressed as being knowledge based, participatory, consensus oriented, accountable, transparent, responsive, efficient, unbiased and inclusive. Successful governance needs also to be responsive to the present and future needs. Sustainable governance can be said to be a governance with ability to respond to current environmental, social and political challenges. River basin management, as expressed in the water framework directive, emphasize adaptive, knowledge based management and participation, including the rights and responsibilities of different stakeholders, which in theory can be considered well in line with key elements of successful governance. However, it requires combinations of different governance approaches on different scales considering different combinations of sector interest.

What is good and sustainable governance with regard to the restoration/rehabilitation of rivers, streams and lakes due to hydropower pressures? What level of public participation is relevant? What is a good enough knowledge base? How to handle risks in a changing environment? How do we provide governance in a situation when ecological results are uncertain and takes long time?

08.30-09.15 Governance with regard to sustainability, resilience, biodiversity and climate change, Daryl Fields, World bank

09.15-09.45 Challenges in Riverine Ecosystem Management, Stefan Schmutz, BOKU

09.45-10.15 Local/regional water governance, Joakim Kruse, Bothnian Sea River Basin Authority

10.15-10.45 Coffee

10.45-11.15 Governance of Baltic Salmon Stefan Palm, SLU

11.15-11.45 Sport fishing values, Glen Douglas, Swedish Angling Association

11.45-12.00 Closing remarks by Director General Jakob Granit

12.30 Lunch

13.30 Transfer to Luleå Airport