

Flood control and drought management



Welcome to all participants. Workshop will start 14.00 CET

Please mute yourself when not speaking. Turn on the camera only when requested. Please use the chat to give comments and ask questions.

ANNEX IX -Valuing Hydropower Services

Task 1. Energy, Grid Services and Flexibility:

The future role and value of hydropower in energy markets and electricity systems. The final outcome of this task is a Hydropower Balancing and Flexibility Roadmap



Task 2. Climate Change Services Adaptation:

The role and value of hydropower in minimising or mitigating risks associated with a changing climate

Joint Annex IX-XII Task



Climate Change Services and Adaptation

Three task objectives:

- 2.1 Understanding the role of hydropower in minimising or mitigating risks associated with a changing climate with focus on flood and drought control
- 2.2 Assessing the value that hydropower provides in minimising or mitigating risks associated with a changing climate
- 2.3 Disseminate results and findings in conferences, meetings, workshops and through relevant media





| Time | Wednesday 27 th May 2020 | Presented by |
|--------------|---|--|
| 14:00 | Opening and Review of Dec 2019 Joint Workshop Conclusions | Jorge Damazio, CEPEL Atle Harby, SINTEF |
| 14:15 | Brief update on Annex XII activities | Jorge Damazio, CEPEL |
| 14:25 | Brief update on Annex IX activities | Atle Harby, SINTEF |
| 14:35 | Columbia River Case study | Nathalie Voisin, PNNL |
| 14:50 | Flood forecasting and reservoir operation in the East-Telemark hydropower system | Ånund Killingtveit, NTNU |
| 15:05 | Hydropower Services Case Study: Drought Mitigation in Tasmania | Carolyn Maxwell, Hydro Tasmania |
| 15:20 | Break | |
| 15:30 | Paraíba do Sul River case study | Jorge Damazio, CEPEL |
| 15:40 | Simple estimation of potential flood control contribution from hydropower. Case studies from Norway | Bendik Hansen, SINTEF |
| 15:50 | Case study report: Reviewing contributions and edition of report | Operating agents |
| 16:00 | Potential White Paper content | Operating agents |
| 16:15 | Discussion about Special Session at HYDRO 2020 | Operating agents |
| 16:25 | Any other business | All |
| 16:30 | End of meeting | |

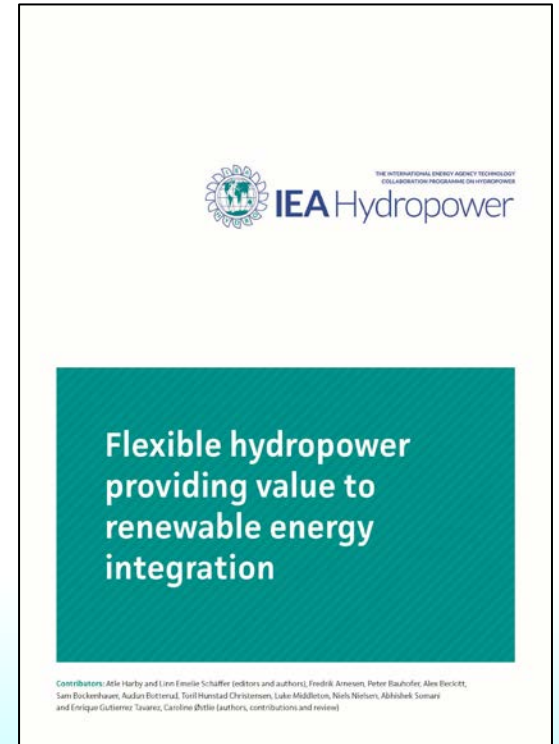
ANNEX IX -Valuing Hydropower Services

- How will hydropower be valued in
 - future electricity market scenarios?
 - providing climate change adaptation services?



Outcome:

- Collecting information, analysing and documenting
- Informing industry, authorities and policy makers
- Hydropower Balancing and Flexibility Roadmap





Further work

- White Paper: "Valuing Hydropower Flexibility in Evolving Electricity Markets". First step is to collect information on current markets and remuneration in different countries/regions. **Online workshop 3rd June**
- Showcasing examples of how hydropower provides value to the society in providing flood control and drought management. Next step is to analyse these services in a changing climate – potential White Paper or journal paper
- Workshops and meetings – also open to join from "non-members"
- Working with IEA on Renewable Energy Market Report
- IEA Hydropower Roadmap
- Dissemination of results



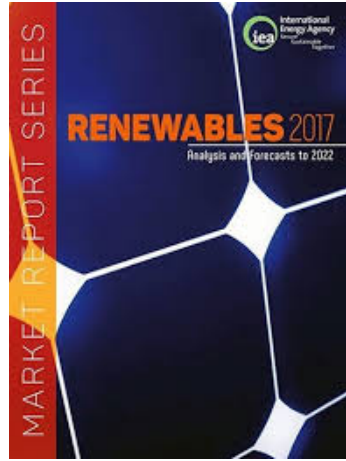
IEA Renewables Market Report 2020

Our discussions will inform our next renewables market report this year, which will focus on hydropower – the largest source of renewable electricity generation.

Fatih Birol
[@IEABirol](https://twitter.com/IEABirol)



Workshop 10. februar
IEA hovedkontor, Paris



....an essential renewable technology that sometimes doesn't get the attention it deserves



10 min break
We resume
15.32 CET





Planning of reviewing contributions and edition of report

- Contributions received:
 - USA – Columbia River Basin Study
 - Australia – Tasmania Case Study
 - Germany - Roßhaupten with Forggensee reservoir
 - Germany – Schluchtseewerke
 - Turkey - Southeastern Anatolia Project (Gap)
 - Japan - Nukabira Hydropower Plants flood control management services
- Expected contribution
 - Brazil
 - Norway
 - Germany



Review process:

- Members of Annex IX and XII
- Comparable case studies

Edition process:

- Make a summary
- Implications for further work
- Done by Operating Agents



White Paper:

Hydropower providing flood control and drought management

- Intro about flood control, drought management and hydropower
- Theory and examples (as boxes) on how hydropower contributes to flood control and drought management
- Future needs for services like flood control and drought management
- The value of services like flood control and drought management (discussion)

Contributions?

