

WATSTOR

Romanian-Norwegian network visit to Norway

16-20 October 2017

Monday 16 October

- 09:30-10:00: Welcome and organising at NR
- 10:00-10:45: Planning week's agenda
- 11:00-11:45: Lunch (NVE)
- 12:00-16:00: Visit to Norwegian Water Resources and Energy Directorate (NVE)
- 16:30-17:30: Discussion on proposal ideas (NR)

Tuesday 17 October

- 09:30-11:00: Visit to the water resources company EdInsights (Forskningsparken)
- 11:00-12:00: Lunch (EdInsights)
- 13:00-14:30: Visit to Norwegian Space Centre (NSC)
- 16:00-17:00: Visit to Energy Norway
- 17:30-18:30: Discussion and updating proposal ideas (NR)
- 19:00-22:00: Dinner (Lofotstua)

Wednesday 18 October

- 09:00-10:00: Driving from NR to Solbergfoss
- 10:00-11:30: Visit to Solbergfoss hydroelectric power station
- 11:30-12:30: Driving back to Oslo
- 12:30-13:15: Lunch (NR)
- 13:30-15:00: Visit from drone company Orbiton (NR)
- 15:00-16:00: Summary of meetings' outcome, discussion, planning proposal process

Thursday 19 October

- Development of first draft of proposal(s) (NR)

Friday 20 October

- Development of first draft of proposal(s) (NR)

Agenda for visit to Norwegian Water Resources and Energy Directorate (NVE)

Monday 16 October

11:00 – 11:45: Lunch

12:00 – 12:05: Welcome and brief introduction to NVE (Solveig H. Winsvold, HB)

12:05 – 12:30: Can the new satellite, airborne and in-situ sensors improve the estimation of water resources for hydropower purposes? (Gheorghe Stancalie) 20 min. + 5 min. questions.

12:30 – 12:50: Norwegian Flood and Landslide Hazard Forecasting and Warning Service (Hervé Colleuille, HF)

12:50 – 13:05: Cool models for the future (Thomas Skaugen, HB)

13:05 – 13:20: Improving physically based snow simulations by assimilating snow depths using the particle filter (Jan O. Magnusson, HM)

13:20 – 13:35: Break

13:35 – 13:50: Norwegian Avalanche Forecasting Service (Emma Barfod, HB)

13:50 – 14:05: RegObs (Ånund Kvambekk, HB)

14:05 – 14:20: Detection of avalanches using remote sensing & management of satellite images at NVE (Karsten Müller, HB)

14:20 – 14:35: In situ snow measurements (Heidi B. Stranden, HB)

14:35 – 14:50: Flood and snow project NVE/NR (Rune Solberg, NR)

14:50 – 15:05: Lake and river ice (Kjetil Melvold, HB)

15:05 – 15:20: Guided tour to the Forecast of Flood and Landslide Hazard section (Søren N. Boje and Inger Karin Engen, HF)

15:20 – 16:00: Discussion

Agenda for visit to EdInsights

Tuesday 17 October

09:30 – 09:40: Welcome, introduction of participants

09:40 – 10:00: Introduction to EdInsights and project examples (Frano Cetinic)

10:00 – 10:10: Introduction to NMA and the Romanian team (Gheorghe Stancalie)

10:10 – 10:30: Can the new satellite, airborne and in-situ sensors add value to the estimation of water resources for hydropower purposes? (Gheorghe Stancalie)

10:30 – 11:00: Discussion on potential collaboration and projects between Romania and Norway

11:00 – 12:00: Lunch

Agenda for visit to Norwegian Space Centre (NSC)

Tuesday 17 October

13:00 – 13:10: Welcome, introduction of participants

13:10 – 13:40: Introduction to earth observation at the NSC (Terje Wahl)

13:40 – 13:50: Introduction to NMA and the Romanian team (Gheorghe Stancalie)

13:50 – 14:00: On potential collaboration between Romania and Norway involving national space agencies and ESA (Gheorghe Stancalie)

14:00 – 14:30: Discussion on potential collaboration and projects between Romania and Norway

Agenda for visit to Energy Norway

Tuesday 17 October

16:00 – 16:10: Welcome, introduction of participants

16:10 – 16:30: About Energy Norway and the Norwegian energy sector (Magne Fauli)

16:30 – 16:45: On potential collaboration between Romania and Norway with focus on the hydropower sector (Gheorghe Stancalie)

16:45 – 17:00: Discussion on potential collaboration and projects between Romania and Norway

Agenda for visit by Orbiton

Wednesday 18 October

13:30 – 13:40: Welcome, introduction of participants

13:40 – 14:25: Drone data-capture: beyond proof of concept (Gonzalo Figueroa)

14:25 – 14:45: On potential collaboration between Romania and Norway involving national space agencies and ESA (Gheorghe Stancalie)

14:45 – 15:00: Discussion on potential collaboration and projects between Romania and Norway

Visit to Solbergfoss hydroelectric power station

Wednesday 18 October

Region: Askim municipality, Østfold
 Waterfall: Glomma
 Fall height: 14 m
 Start year: 1924, 1985
 Operator: E-Co Energi and Statkraft
 Installed power: 208 MW
 Annual production: 900 GWh

Solbergfoss power plant is a hydroelectric power plant in the river Glomma in Askim municipality in Østfold county. The power plant is a river power plant and a dam is made across the river which together with the waterfall constitutes a fall of 14 meters. The average annual water supply in Glomma at the plant is 689 m³/s.

The plant consists of two power stations:

- Solbergfoss I was put into production in 1924 with six Francist turbines. A further seven turbines of the same kind have been installed later. Total capacity is 108 MW. The power station is in the day and was designed by Bredo Greve.
- Solbergfoss II started production in 1985 and is equipped with a 100 MW capillary turbine. The station is within the mountain.

Average annual production is 900 GWh. The power plant is owned by E-Co Energi 64.4% and Statkraft with 35.6%.

