Norway is blessed with high precipitation rates and a topography which is ideal for hydropower development and it is now more than 100 years since the first hydropower plant was set in operation. Until the early 1990’s the main purpose has been to secure reliable supply of electricity to households and power-intensive industry. From the 1970’s an increased concern about the environmental impacts due to river regulations raised in the general public, and more comprehensive environmental studies were carried out and the stricter environmental requirements/legislation were put in place. As we have a long history in of carrying out environmental studies in regulated rivers, and a traditional of performing assessment across traditionally separated disciplines, i.e. by performing studies were hydrologists, hydraulic experts, biologists and even social scientists are working in a team, Norway is today among the leading countries on carrying out integrated environmental studies. The talk at the seminar on sustainable hydropower development, hosted by METU (Turkey), will focus on three specifics topics – assessment environmental flows in bypass sections, environmental impacts from hydro-peaking (intermittent flow regulation) downstream outlet of hydropower plants and emissions of green-house gases from hydropower reservoirs.