



## **Challenges in establishing an ICOS Ecosystem Station**

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The measurement network Integrated Carbon Observation System (ICOS) is dedicated to the quantification of fluxes of CO<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>O and CH<sub>4</sub> at the boundary between vegetation surfaces and the lower atmosphere. The implementation of observations sites follows strict protocols and a challenging labelling process to ensure standardized intercomparable observations. We report on our experiences in attempting to establish the only Norwegian ICOS Ecosystem site thus far, NO-Hur, located in an old-growth spruce forest at Hurdal in Southeast Norway. NO-Hur is planned as a class 2 site, with the option to an upgrade to class 1 later. The instrumentation and sensors needed, the requirements for spatial homogeneity and a detailed analysis of a digital terrain model are presented. The current status of the tower construction, the preliminary measurements obtained with the existing ICOS-certified equipment at a test site, and the plans for integrating the measurements operationally into the network are shown.