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NORSK INSTITUTT FOR BIOØKONOMI

CAPTURE+
A DAWN FOR BIOCHAR IN NORWAY

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OVERVIEW

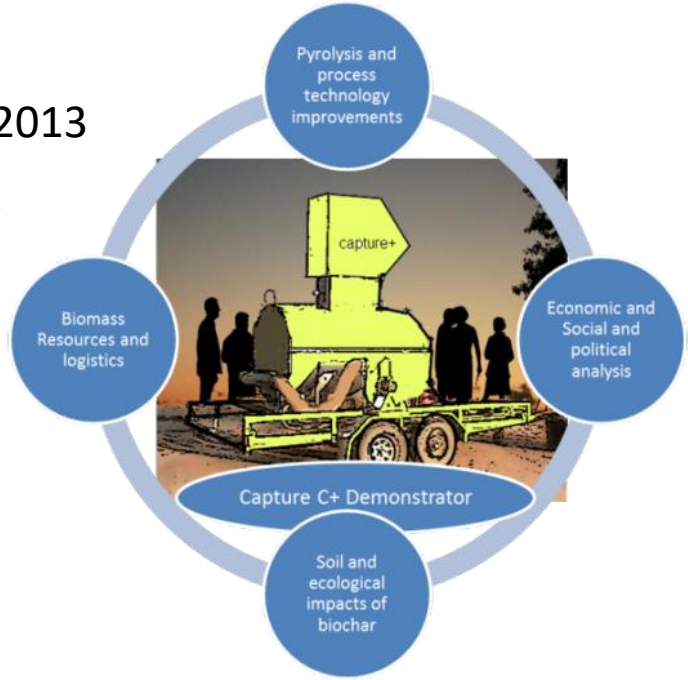
- Past biochar research in Norway
- The Capture+ project
- Norway’s first farm-scale pyrolyser
- Norway’s GHG reductions: Obligations and openings for biochar
- Recent initiatives and projects

PAST BIOCHAR RESEARCH IN NORWAY

- Initiated by Daniel Rasse in 2007
- Lab and field trials on stability using C-13 and BPCA
- Yield, changes in soil characteristics and N_2O emissions
- Effects on soil biota and mycorrhiza
- Effects on metal uptake in plants

THE CAPTURE+ PROJECT

- Originated as a zero emission society sandpit winner, 2013
- Grouped NIBIO, SINTEF, Univ. of Life Sciences, DNV-GL and Inst. of Rural Research in a multidisciplinary team

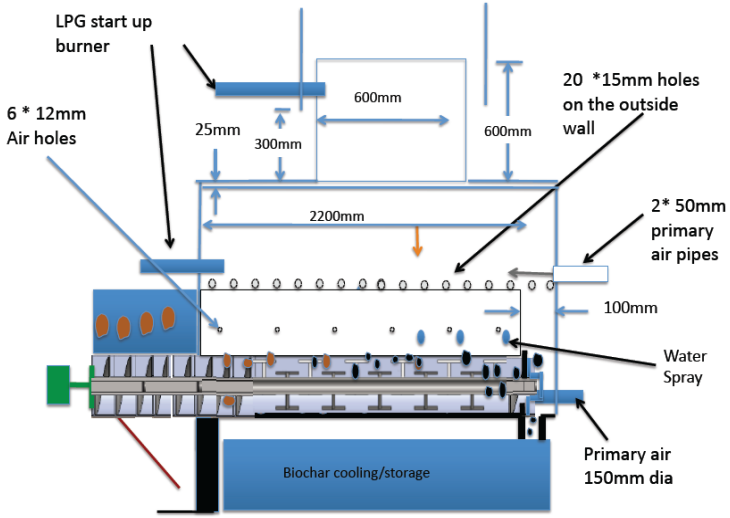


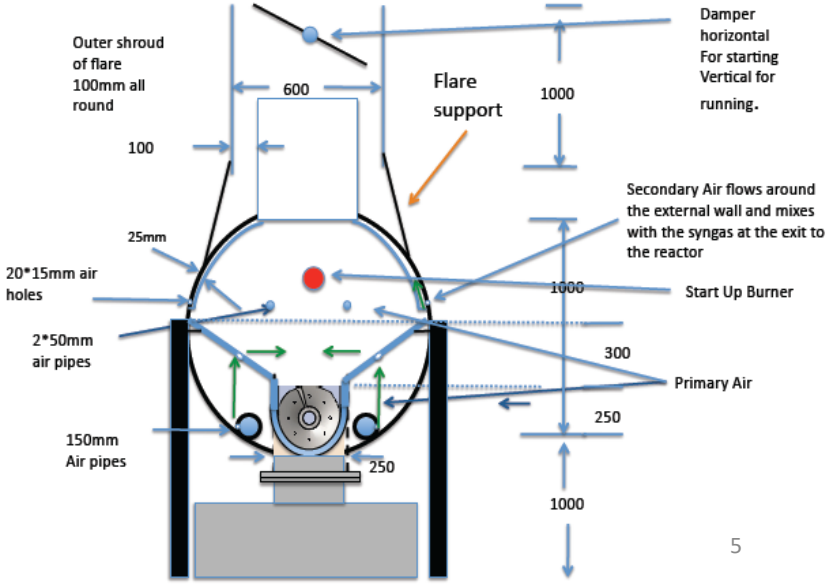
Four aims:

- Explore implementation of biochar in Norway
- Improve pyrolysis processes using catalysers
- Explore value enhancement through synergies with other value chains
- Produce a small-scale demonstrator

NORWAY'S FIRST FARM-SCALE PYROLYSER

- Built by Russell Burnett in Australia in 2016 based on open source design by Prof. Stephen Joseph
- Capacity of 300 kg biomass/hr, produces 400 kW heat to air heat exchanger





NORWAY'S FIRST FARM-SCALE PYROLYSER

- Placed at Skjærgaarden Gartneri at Åsgårdstrand
- Motivation: Improving poor soil used for field grown plants
- Inagurated June 2017
- Co-financed by the county, Capture+ and Skjærgaarden
- Total cost: € 100.000,-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CAPTURE +
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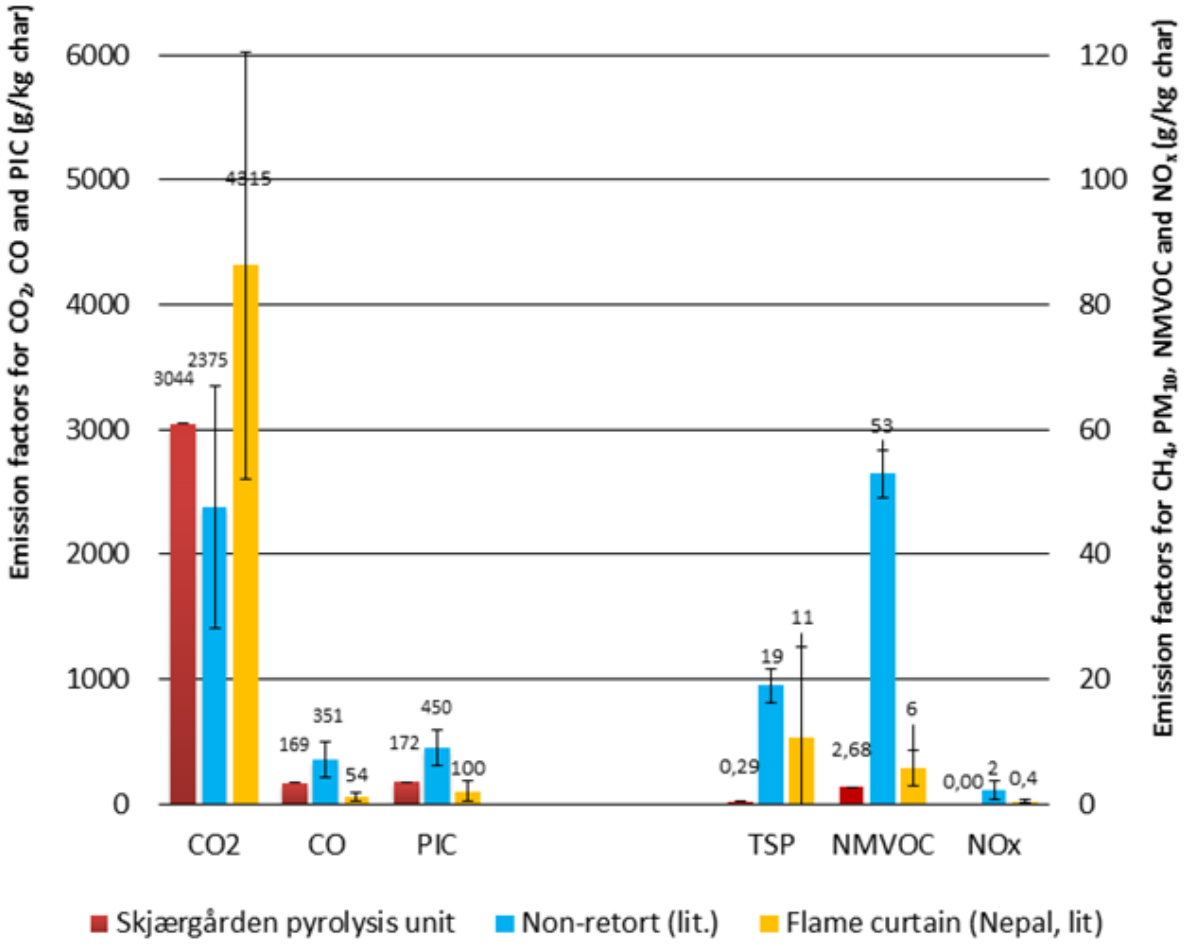
KOMPOSTVENDER

EMISSIONS

- ✓ Low CO_2
- ✓ Very low CO
- ✓ Very low particle
- ✓ Very low VOC
- ✓ Zero NOx



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