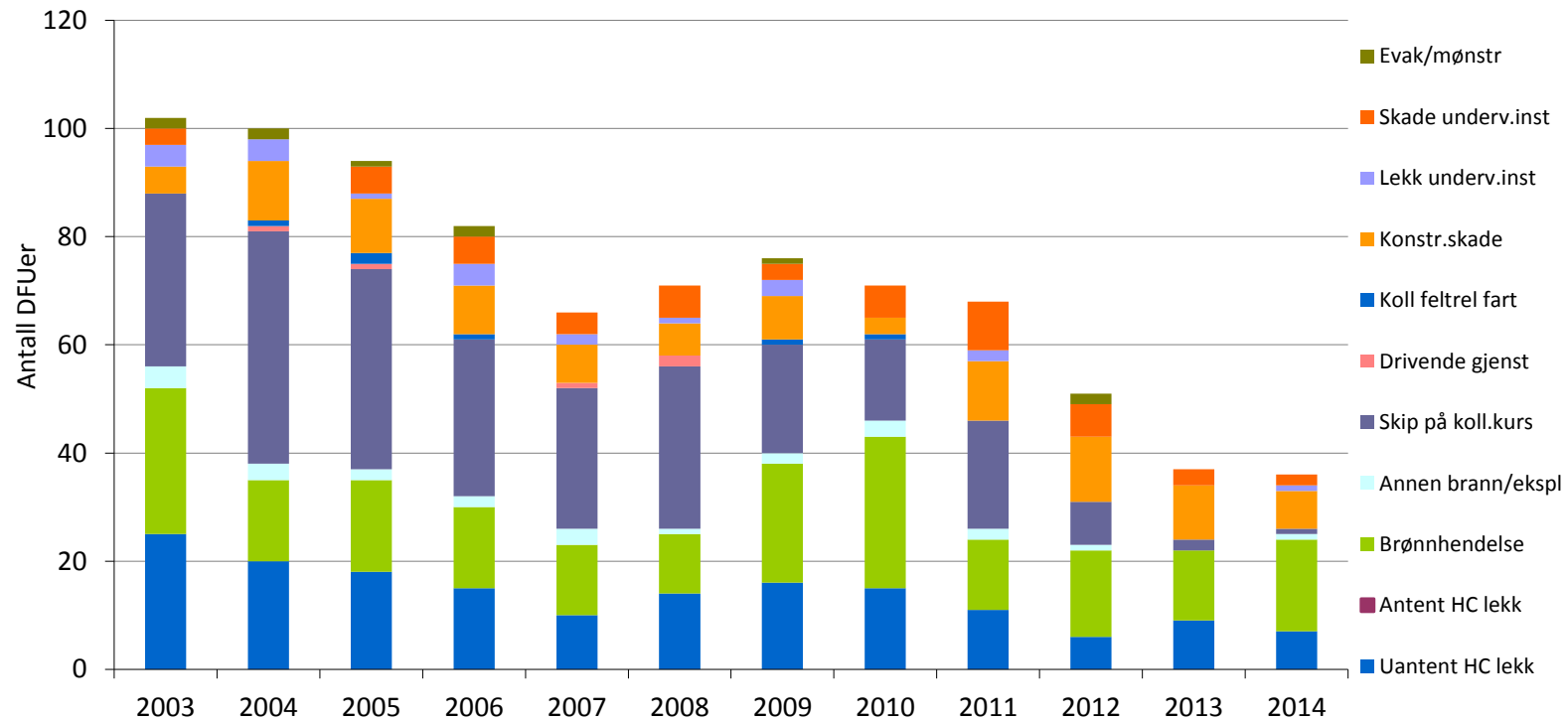


RNNP 2014 - Brønnkontrollhendelser

Monica Ovesen
Fagleder - Boring og
Brønn Ptil



Registrering av DFUer - alle innretninger (ikke helikopter)



Matrise for kategorisering og klassifisering av brønnkontroll hendelser – ifm boring og komplettering operasjoner

Degree of seriousness

Drilling and Completion

Guidance

Level 1- Red Critical well control incidents	1. Blowout	1. Blowout to environment or facility including underground blow out. Failure of primary and secondary barriers that can be handled by relief well drilling, capping or handled on the installation
	2. High HC influx rate	2. Failure of primary well barrier. Activation of the secondary well barrier in critical kill operations with high risk of blowout.
	3. High rate shallow gas flow	3. Shallow gas incident with unsuccessful kill operation. Gas flowing to seabed or installation.
	4. High rate shallow water flow	4. Shallow water flow influencing stability of an installation (jack-up, fixed installation or template)
Level 2 – Yellow Serious well control incidents	1. Medium HC influx rate	1. Influx above kick margin, but possible to regain barrier with standard kill procedure.
	2. Fluid barrier lost	2. Loss situation without being able to maintain the hydrostatic pressure in the
Level 3 – Green Regular well control incidents	1. Low HC or water influx rate	1. Influx below kick margin, and successfully regained barrier with standard kill procedure without degrading well integrity.
	2. Low rate shallow gas flow	2. Shallow gas incident with kill operations. No gas handled on installation (riser-less operation)
	3. Low rate shallow water flow	3. Shallow water flow incident.
Level 4 - Non Classified (NC)	1. Uncontrolled non-continuous gas/water migration in well - with all barriers in place	1. Typical when releasing a barrier element with gas/water trapped below and adequate procedures not initiated

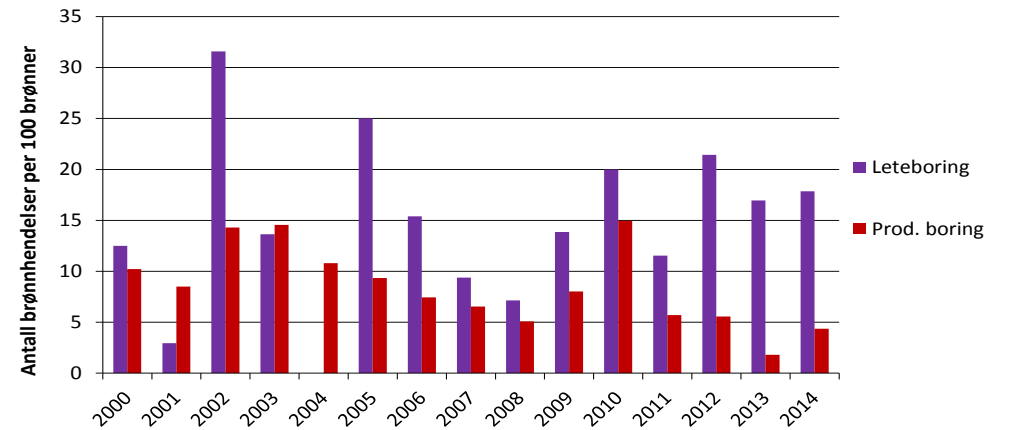
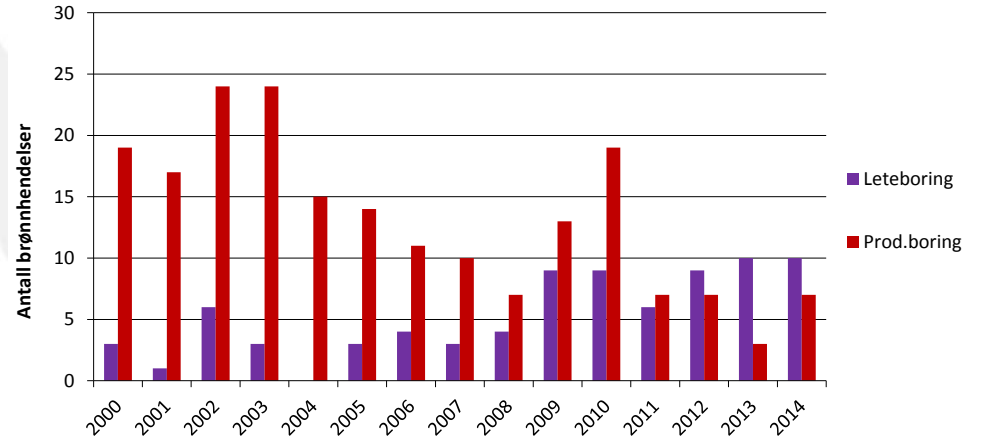
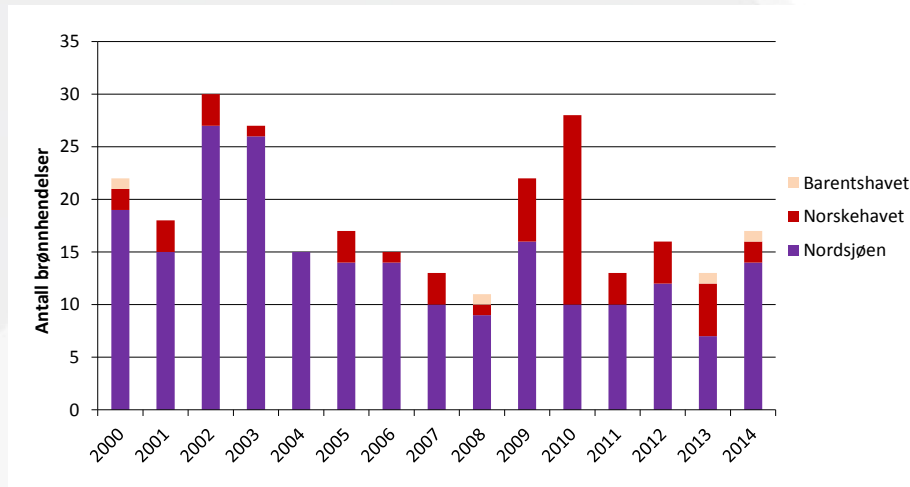
Tan = Alert to PSA according to management regulation

Blue = Notification to PSA according to management regulation

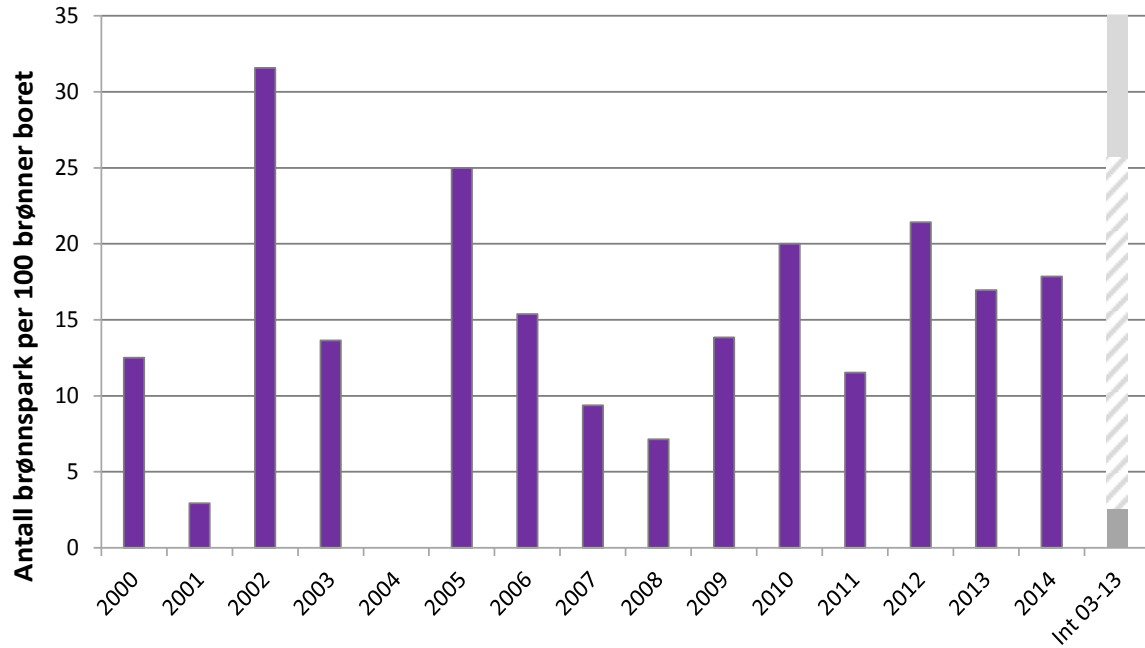
Grey = Alert or Notification to PSA not required



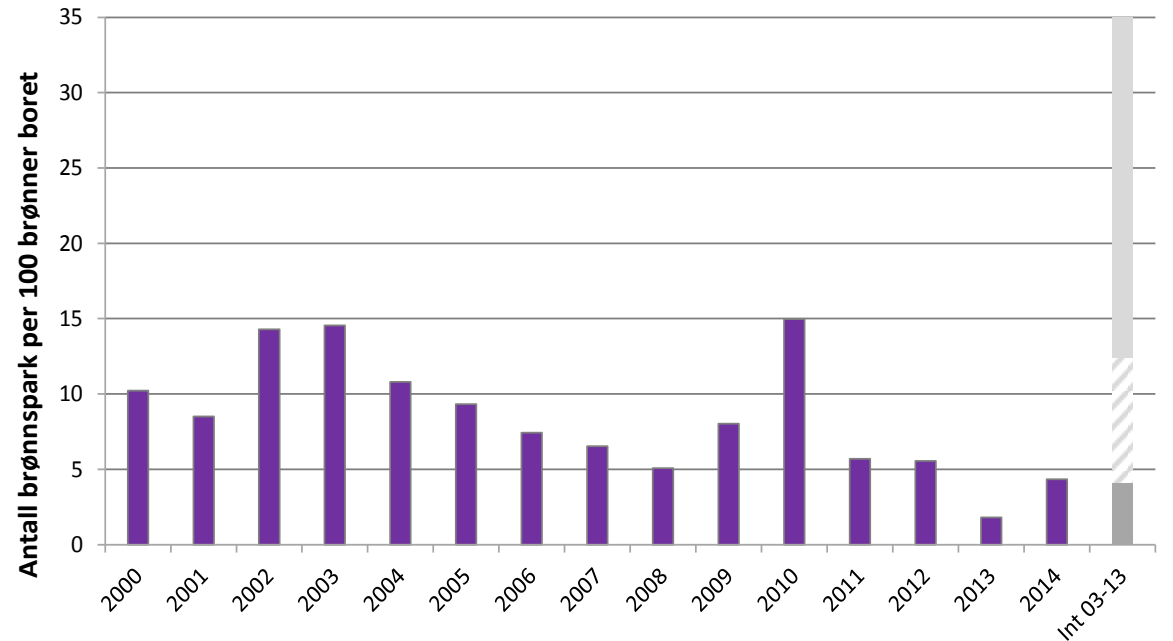
Brønnkontrollhendelser



Brønnkontrollhendelser, trender

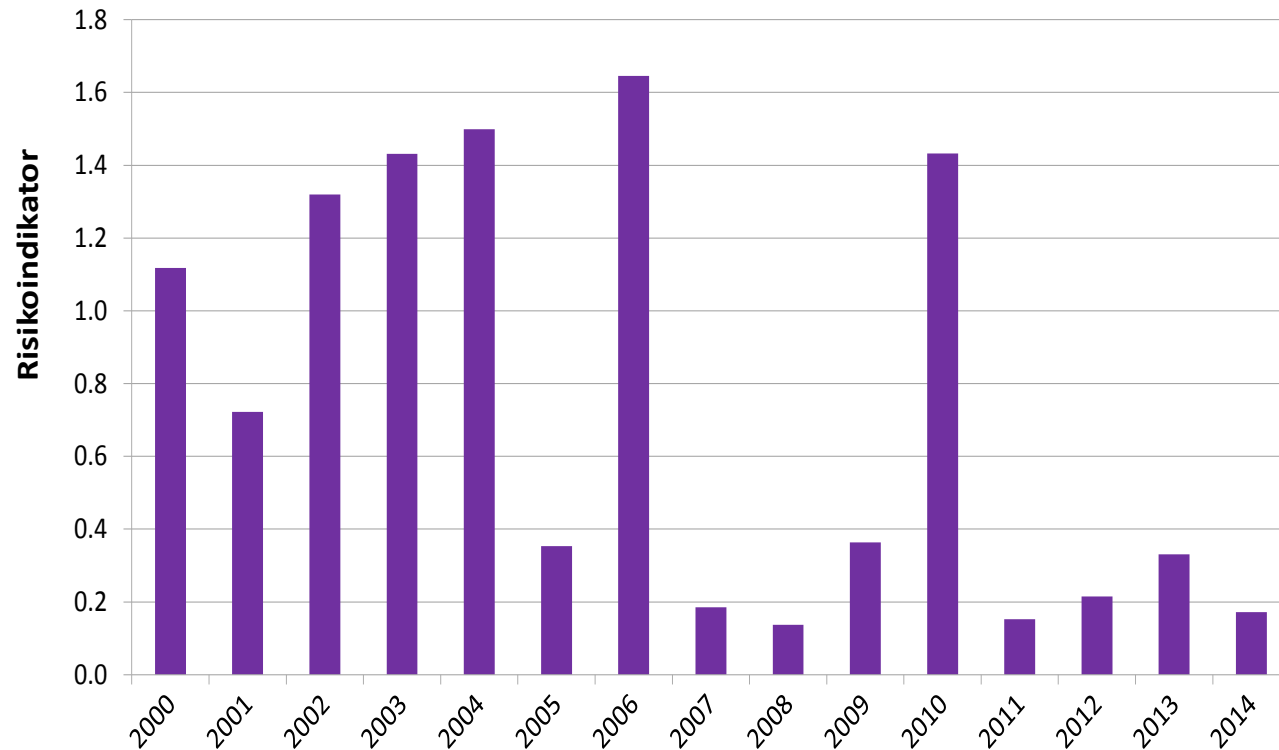


Leteboring



Produksjonsboring

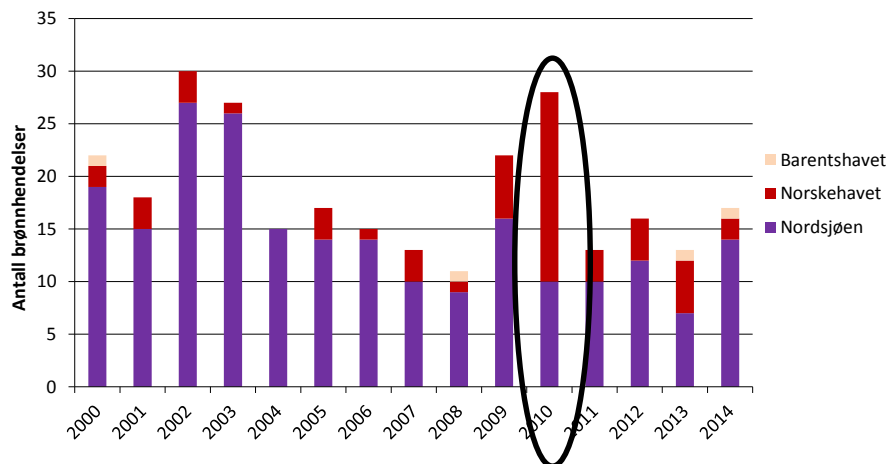
Brønnkontrollhendelser, risikobidrag (produksjon og leteboring)



Figur viser utviklingen i vektet risiko for tap av liv normalisert mot arbeidstid i observasjonsperioden for produksjons- og leteboring samlet.



Tilbakeblikk



Fire identifiserte utfordringer

1. Sterkere satsing på tekniske tiltak for å bedre sikkerheten

2. Økt satsing på planlegging, barrierestyring og mer tilpassede risikoanalyser

Det er viktig å tydeliggjøre *alle* barrierene under boring med tilhørende barriereelement, sette ytelseskrav til disse, og sikre at kravene følges opp i drift

3. Mer fokus på storulykkesrisiko – mer granskning av hendelser

Flere granskinger vil gi den nødvendige innsikten i hvorfor brønnkontrollhendelser skjer - noe som igjen er en forutsetning for effektive tiltak og erfaringslæring i næringen

4. Skape rammebetingelser for god samhandling i operatør-leverandør-hierarkiet



Spørsmål

