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Kort præsentation

Klimaforandringer betyder mere CO_2, højere temperaturer og ændret nedbør. Det vil påvirke økosystemerne - men hvordan? Jeg har i mere end 25 år arbejdet med effekterne af klimaforandringer, luftforurening og arealanvendelse på planter og økosystemer. Det har bl.a. givet ny viden om planters tilpasning til ændrede forhold, både i skove og andre økosystemer.
Jeg betegner mig selv som ”manipulator” idet manipulation med økosystemer i felten er et gennemgående træk i den forskningsmetode jeg sammen med sine kolleger anvender for at teste hypoteser om miljøpåvirkninger og økosystemer. Jeg har været leder af et Villum center of Excellence - CLIMAITE hvor jeg sammen med forskere fra DTU, KU og AAU konstruerede en biologisk tidsmaskine i et nordsjællandsk naturområde. Her manipulerede vi økosystemer med en eller flere af de faktorer der indgår i klimaproblematikken, øget CO2, temperatur og tørke. Det gav mulighed for at kortlægge selve påvirkningerne, men nok så vigtigt samspillet mellem dem. Ideen er at arbejde så realistisk som muligt for at få et troværdigt billede af, hvordan økosystemer reagerer på ændringer og pres. Resultaterne har vakt opsigt på verdensplan og viser bl.a. samspillet mellem de forskellige faktorer kan være af stor betydning men også medføre effekter som er vanskelige at forudsige selvom man kender effekterne af de enkelte faktorer hver for sig. Resultaterne viser desuden at forestillingen om at økosystemerne øget CO2 i atmosfæren vil have en ”gødskningseffekt” og få planter til at vokse hurtigere og mere så den ekstra CO2 fjernes fra atmosfæren ikke er generelt gældende.
Aktuelt forsker jeg især i forståelse af kulstofkredsløbet i økosystemer og hvordan det påvirkes af klimaforandringerne gennem ændringer i plantevækst, plantesygdomme og biodiversitet. Her er jeg i særlig grad optaget af effekterne af ekstreme klimahændelser, hvordan laver vi overhovedet realistiske eksperimenter med disse og hvilke påvirkninger vil de have?

Ansættelse

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