



Biodiversity Assessment and Climate Change

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Abstract: Climate change is having increasingly significant impacts on biodiversity, yet in many regions we are still unable to meaningfully monitor and quantify these impacts, due to a lack of species-occurrence data at relevant scales and compatible formats. For Impact Assessors and decision-making authorities, this makes assessment a very uncertain science. In particular, the spatial- and time-scales within which these impacts are occurring – essentially conflating geological evolutionary spatial- and time-scales of species responses – hampers using traditional data gathering and measurement techniques. This also brings into question how we view biodiversity – for example, the concept of Invasive Alien Species pertains to a world in stasis and is not useful in a world in flux, as the planet currently is and will become increasingly so, under climate change scenarios.

This presentation will provide some in-depth analyses of observed and predicted climate impacts on individual species, taxonomic groups such as forest tree families and whole ecological communities, which all have different responses and thus implications for Impact Assessment. A radical rethink is required in the way we view biodiversity and its inherent ecological interactions if Impact Assessment is going to be able to adapt to remain meaningful in such a rapidly changing world.

Summary: With a planet increasingly in flux, conflating geological evolutionary spatial- and time-scales of species responses, as it is with climate change, requires a radical rethink on how we perceive, measure, and assess biodiversity and ecological interactions, if impact assessment is to remain meaningful in a rapidly changing world.