Detection and attribution

Detection of change is defined as the process of demonstrating that climate or a system affected by climate has changed in some defined statistical sense, without providing a reason for that change. An identified change is detected in observations if its likelihood of occurrence by chance due to internal variability alone is determined to be small, for example, <10%. Attribution is defined as the process of evaluating the relative contributions of multiple causal factors to a change or event with an assignment of statistical confidence (Hegerl et al., 2010).

Detection of impacts of climate change

For a natural, human, or managed system, identification of a change from a specified baseline. The baseline characterizes behavior in the absence of climate change and may be stationary or non-stationary (e.g., due to land use change).