

## 1<sup>st</sup> stage analyses: Quantify population change

### QUESTION

How has the abundance of monitored vertebrate populations changed over time?

### MODELS

Abundance ~ Year using state-space models  
*(one per population time-series)*

INPUT



OUTPUT

Abundance data from population time-series with more than 5 survey points  
*(Living Planet Database)*

Population trend ( $\mu$ ), population fluctuations ( $\sigma^2$ ) and observation error ( $r^2$ ) estimates for each population

