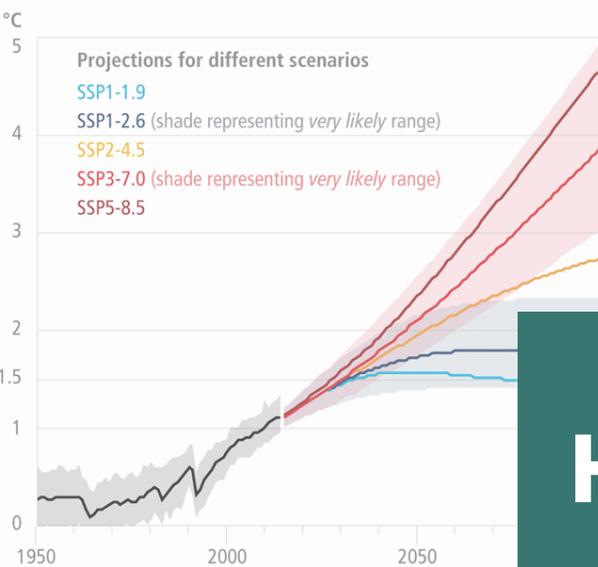
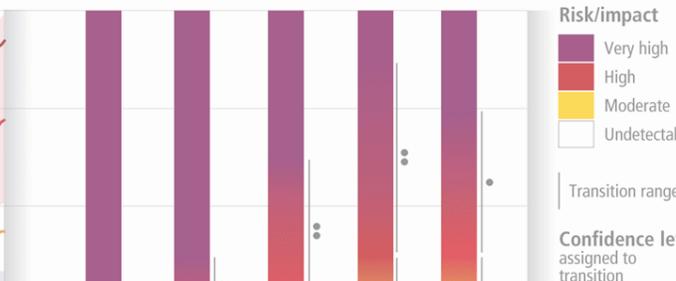


Global surface temperature change
Increase relative to the period 1850–1900



(b) Reasons for Concern (RFC)
Impact and risk assessments assuming low to no adaptation



Human wellbeing in relation to climate, economy and environment

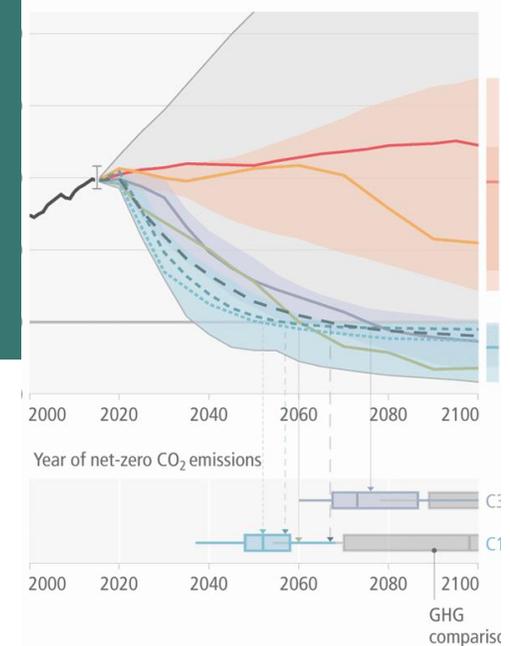
Sibel EKER sibel.eker@ru.nl

Qi Liu, Claudia Reiter, Michael Kuhn

IAMC Meeting 2023



b. Net global CO₂ emissions



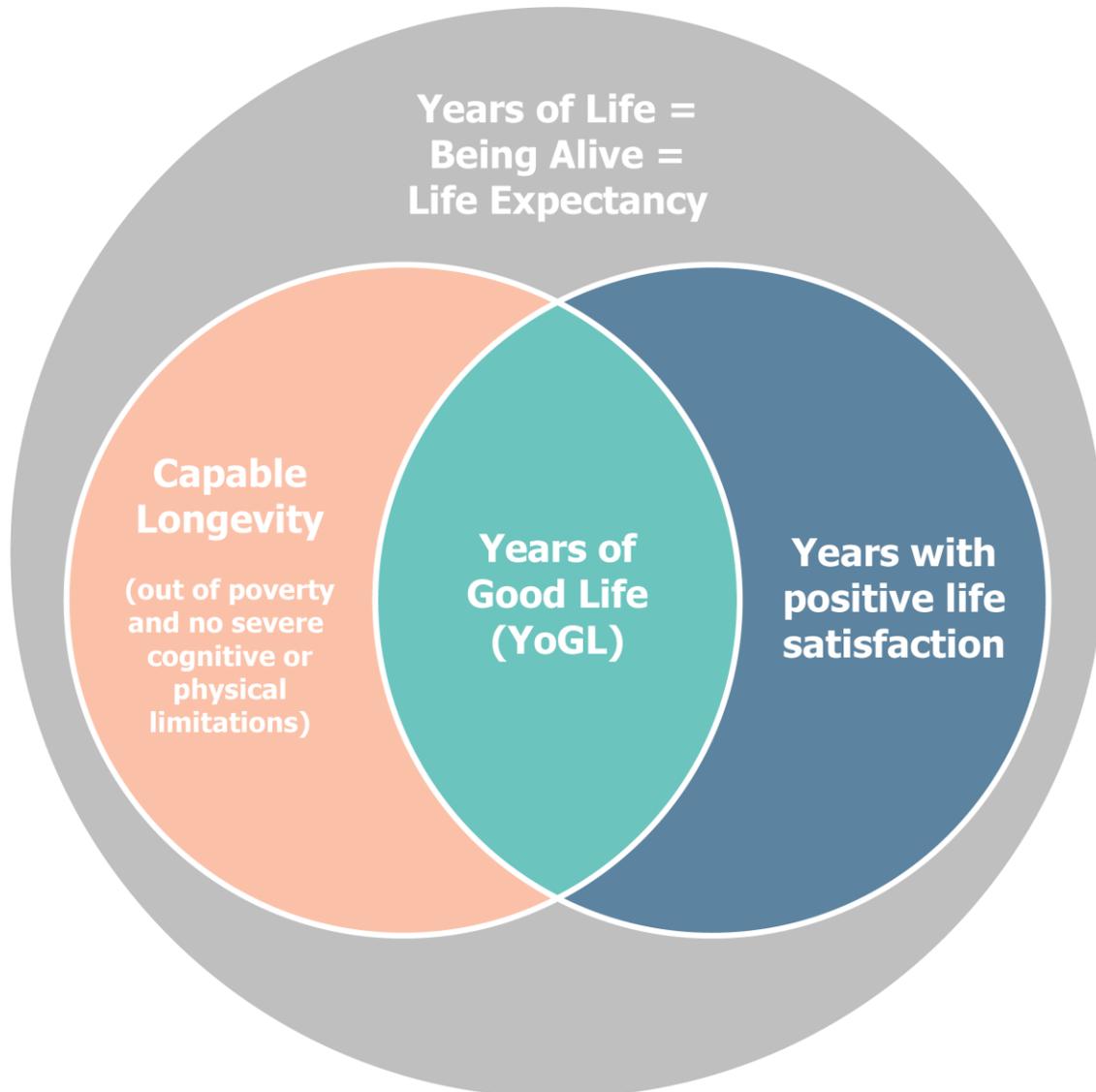
Radboud University



International Institute for Applied Systems Analysis

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Years of Good Life (YoGL)

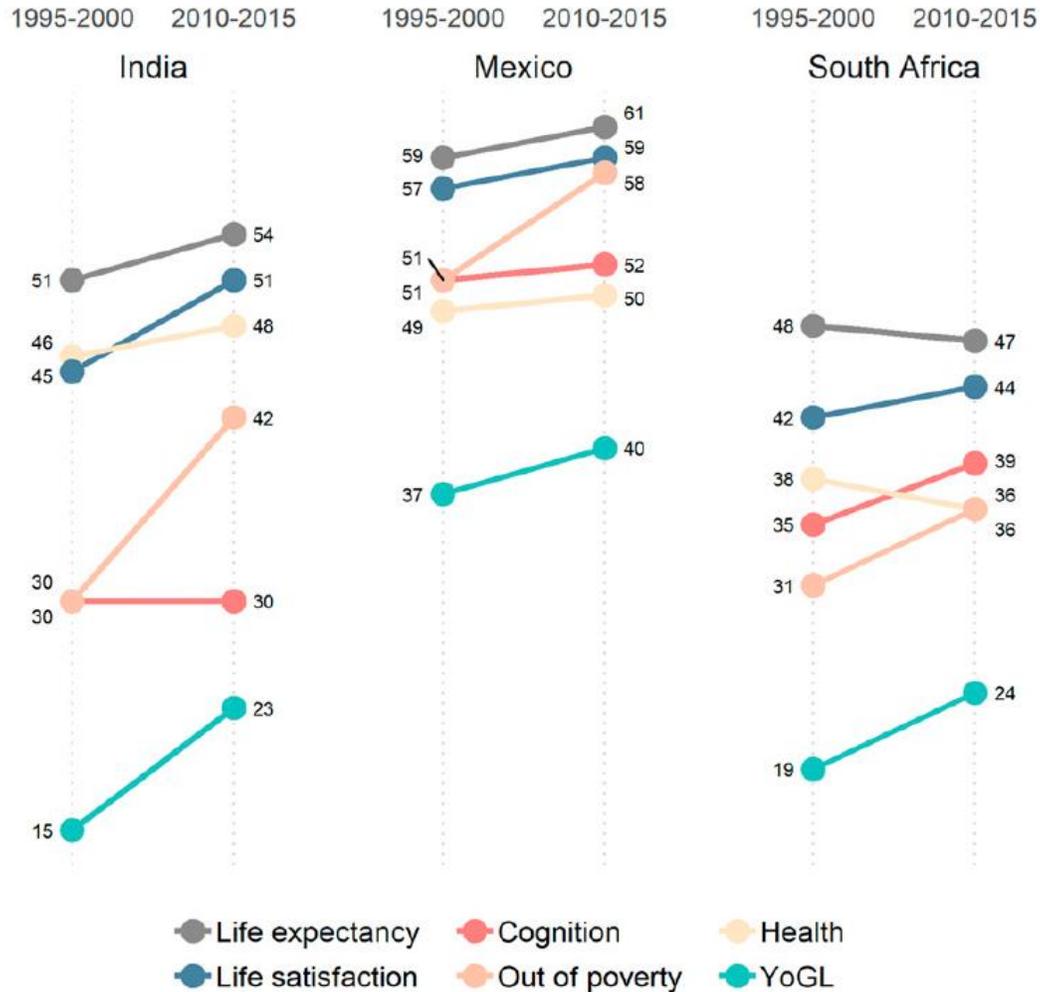


Life Expectancy

- Being out of absolute poverty
- Having no severe activity limitation
- Being cognitively able to function
- Having positive life satisfaction

Years of Good Life (YoGL)

YoGL at age 20, females, change over time (Years)

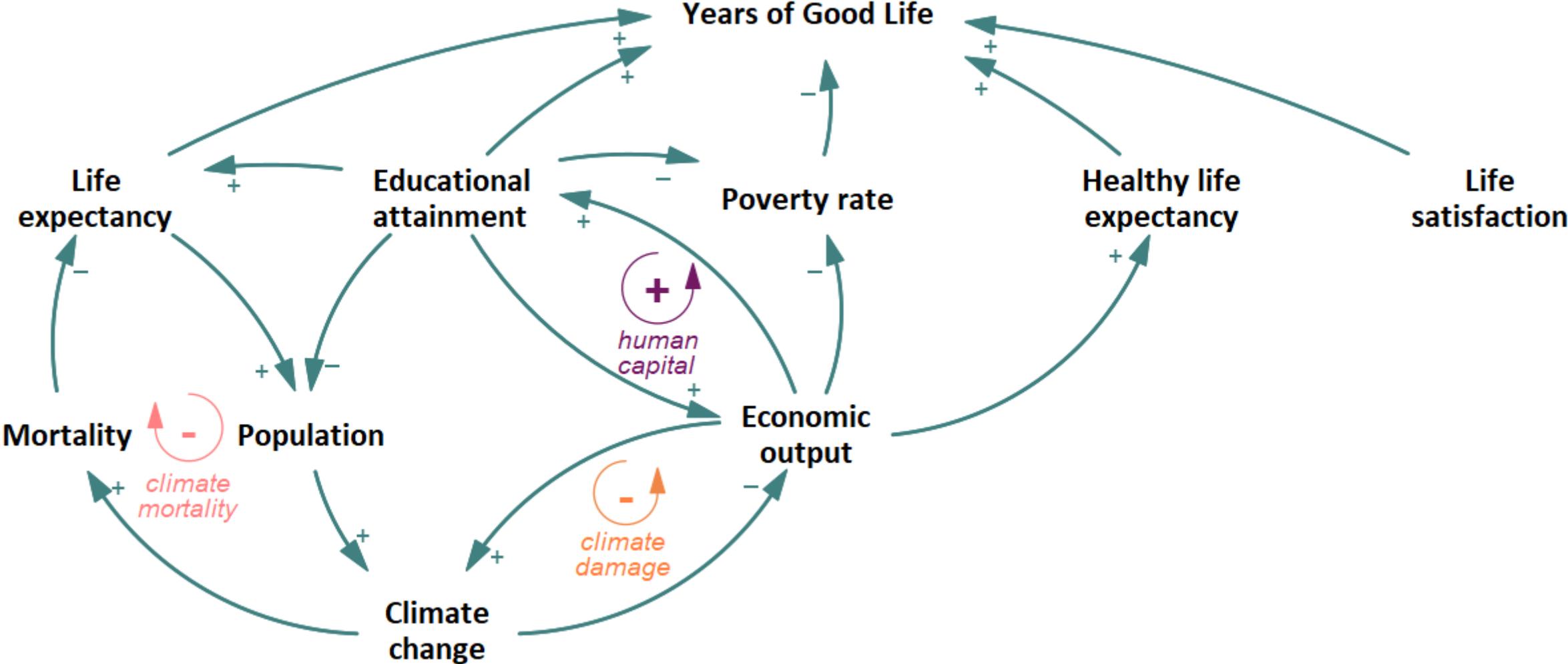


- Applied to observed past and current conditions.
- **How to combine with scenarios addressing future changes including feedback from environmental change?**

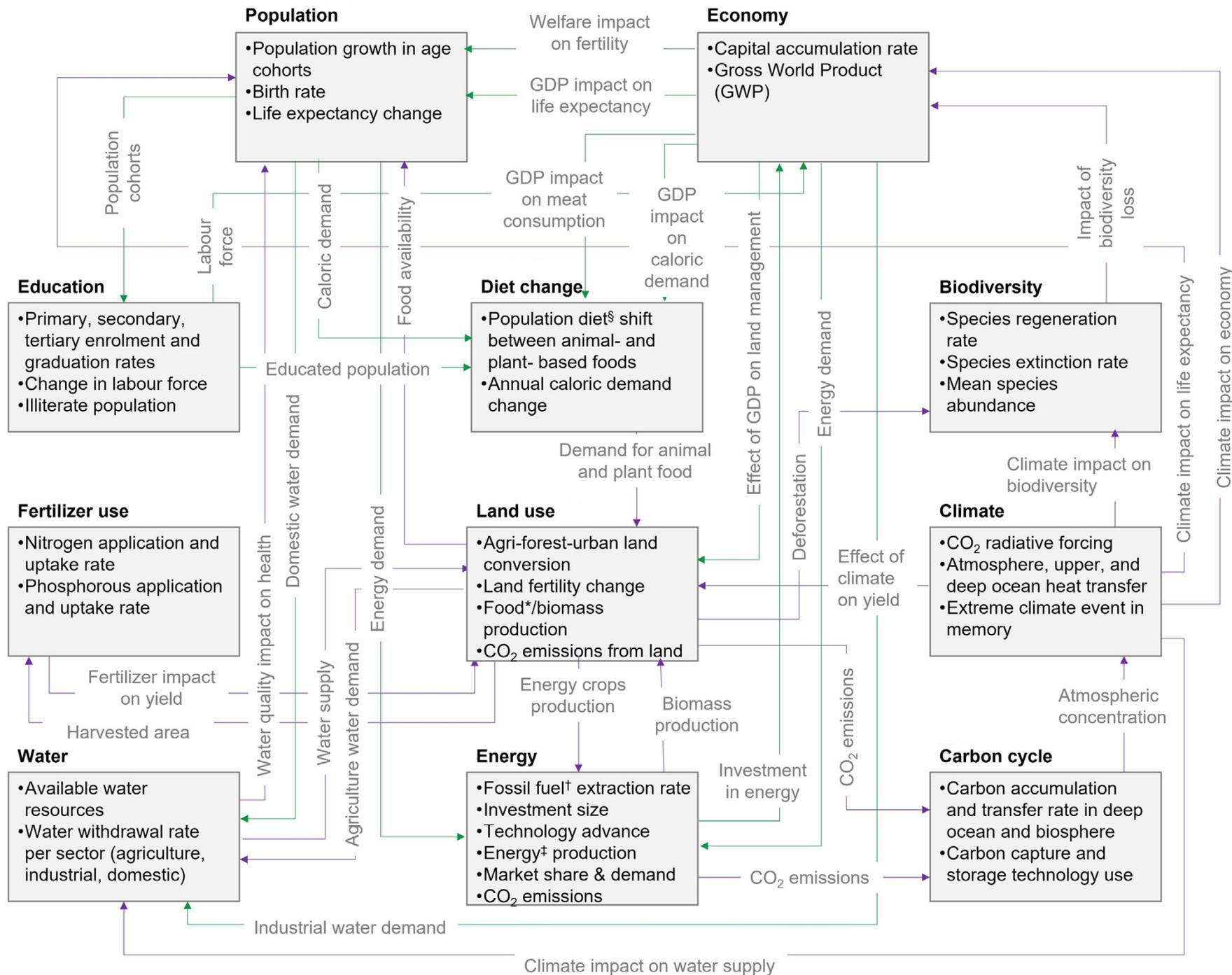
Years of Good Life (YoGL)



Years of Good Life (YoGL)



FELIX MODEL



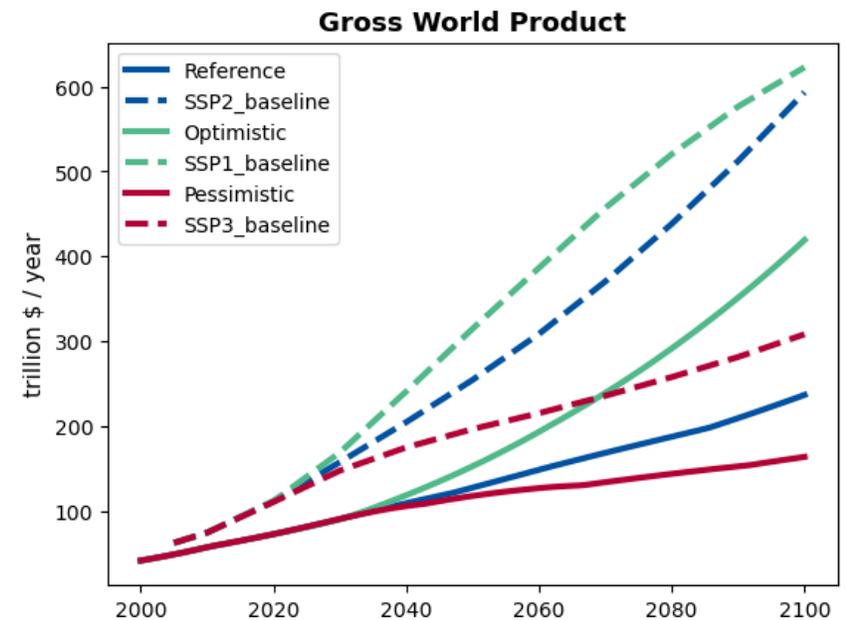
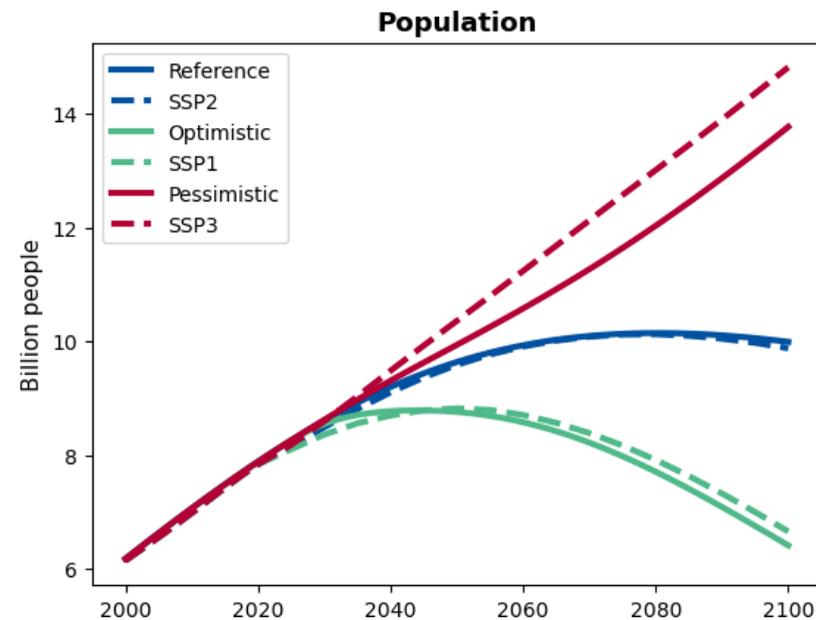
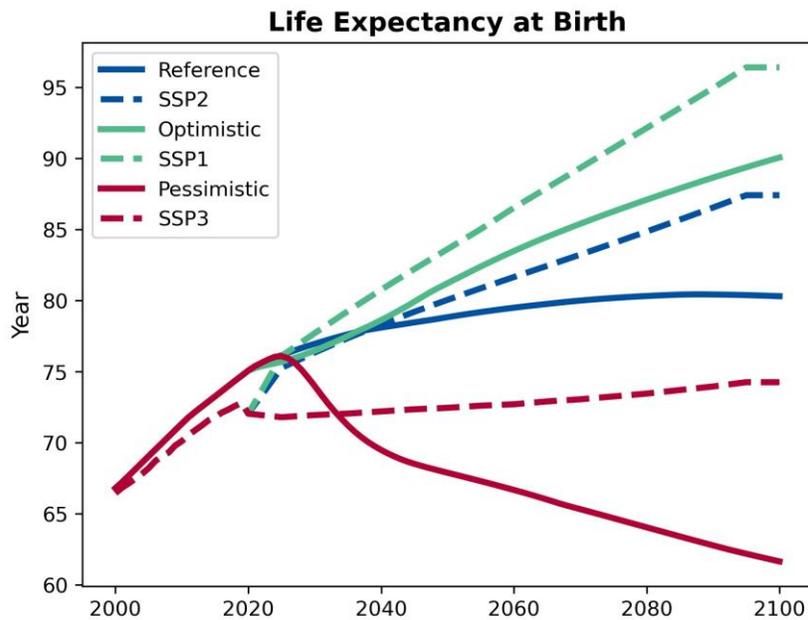
Years of Good Life (YoGL)



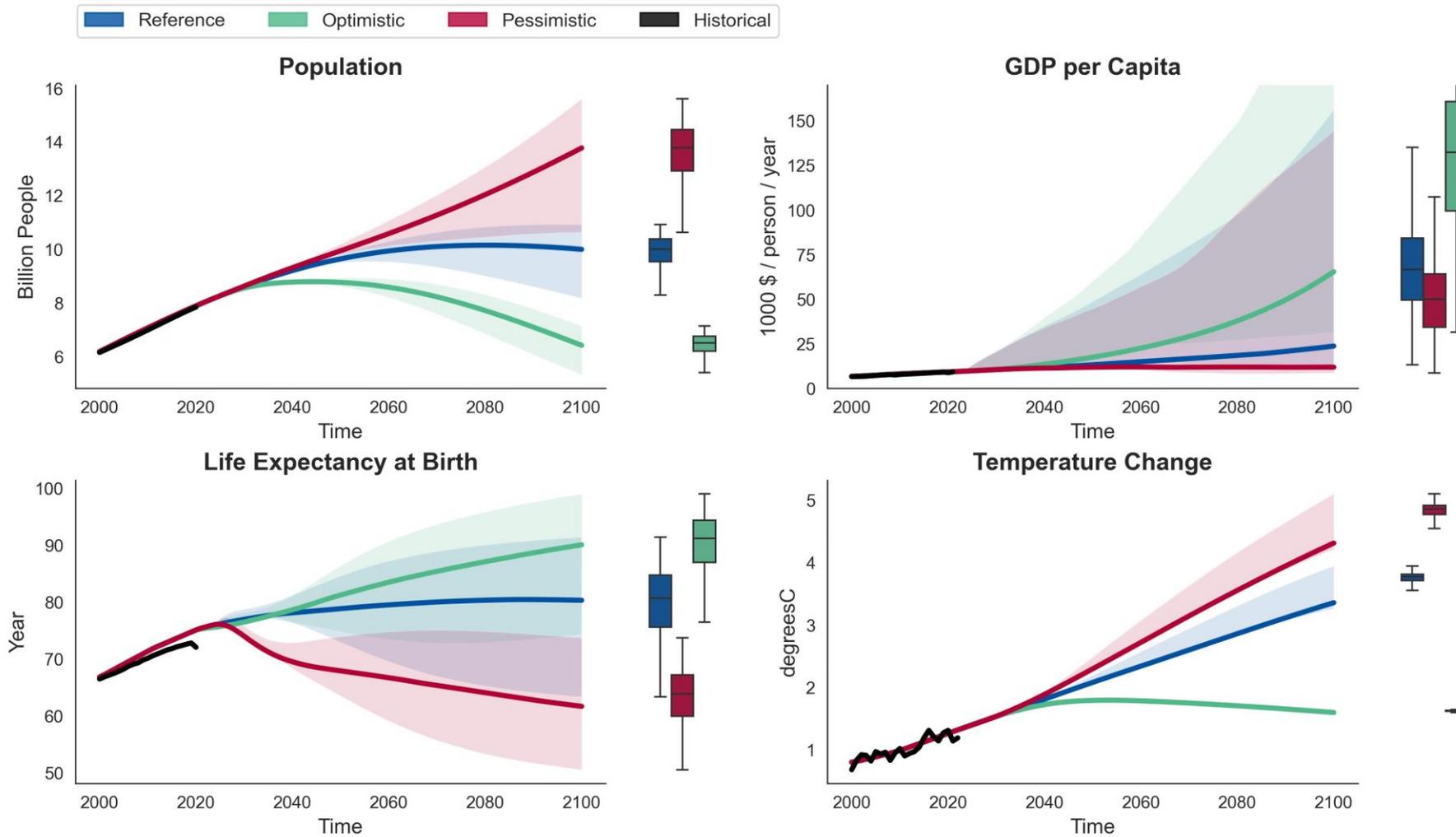
$$\begin{aligned}
 &\text{Prevalence of "good life" for each age group and gender} = \\
 &\text{Population fraction with minimum primary education} \times \\
 &\text{Population fraction out of poverty} \times \\
 &\text{Ratio of healthy life expectancy to life expectancy} \times \\
 &\text{Population fraction reporting life satisfaction}
 \end{aligned}$$

Three baseline scenarios

- **Reference** : **SSP2** narrative with endogenous population and GDP + climate impacts
- **Optimistic** : **SSP1** narrative with endogenous population and GDP + climate impacts
- **Pessimistic** : **SSP3** narrative with endogenous population and GDP + climate impacts



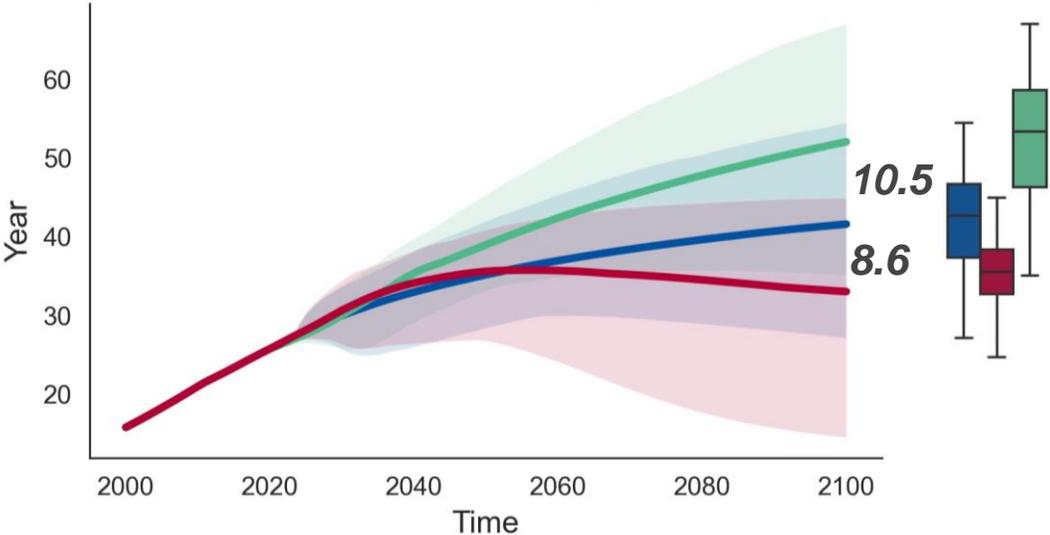
Three baseline scenarios



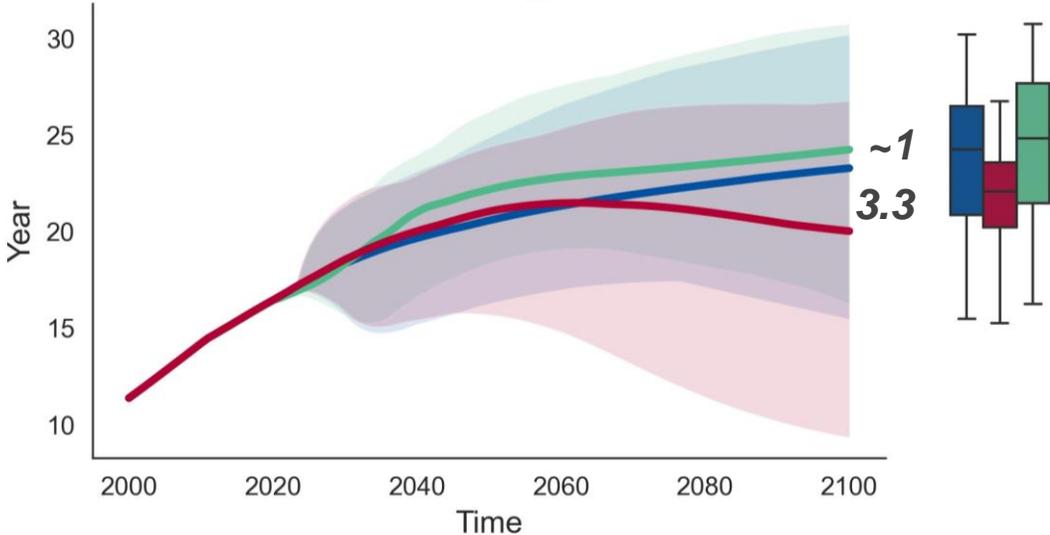
YoGL Projections

Reference Optimistic Pessimistic

Female YoGL at age 20

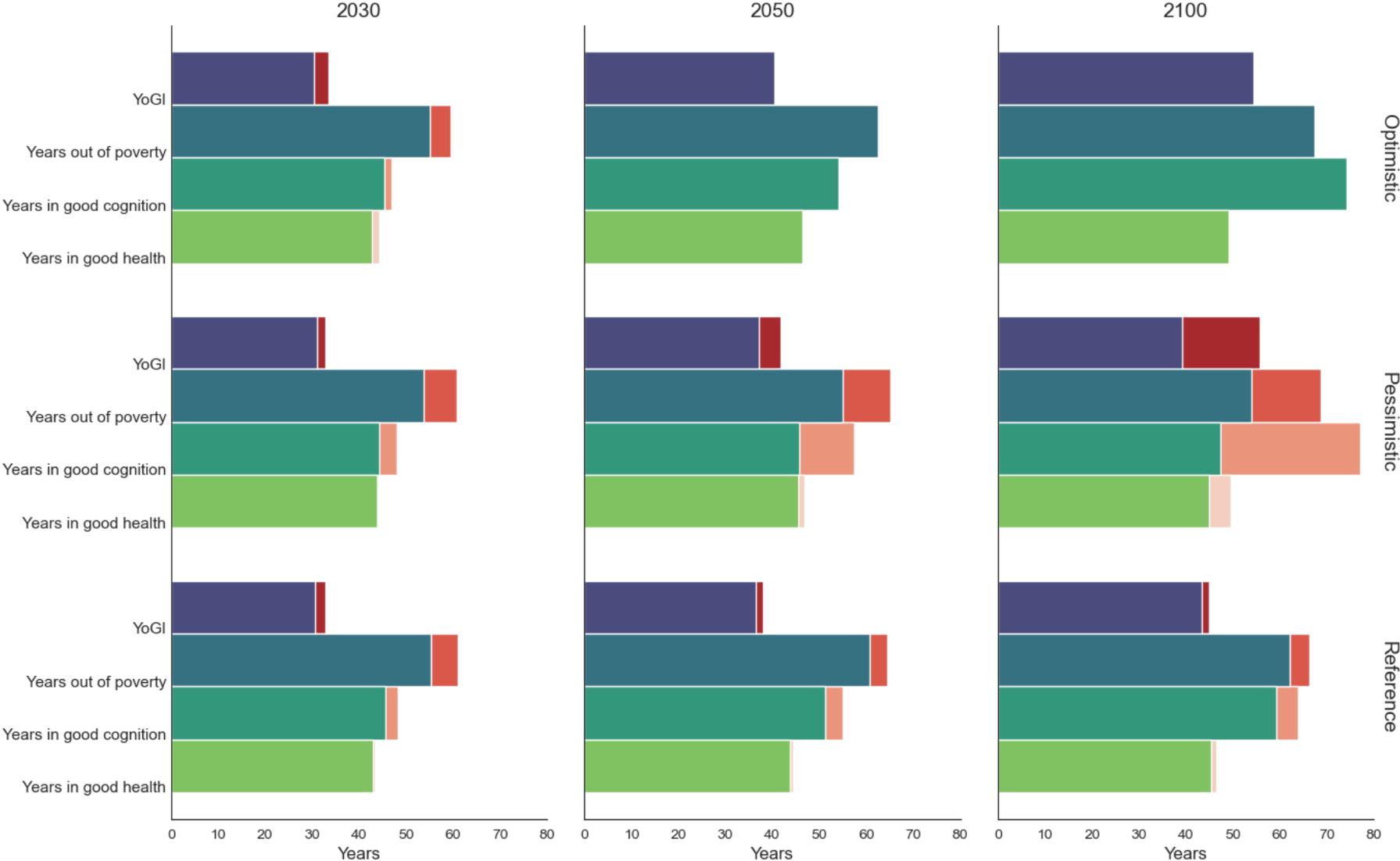


Global Average YoGL



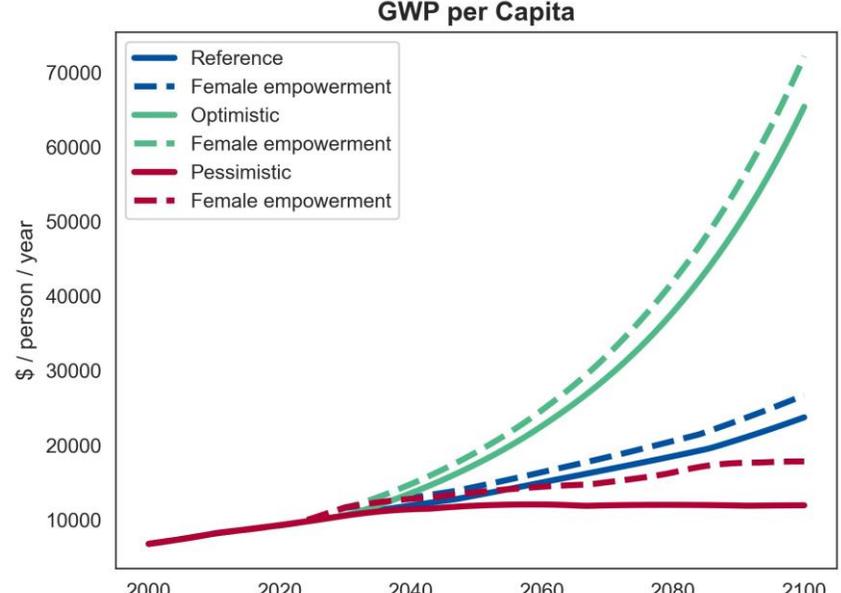
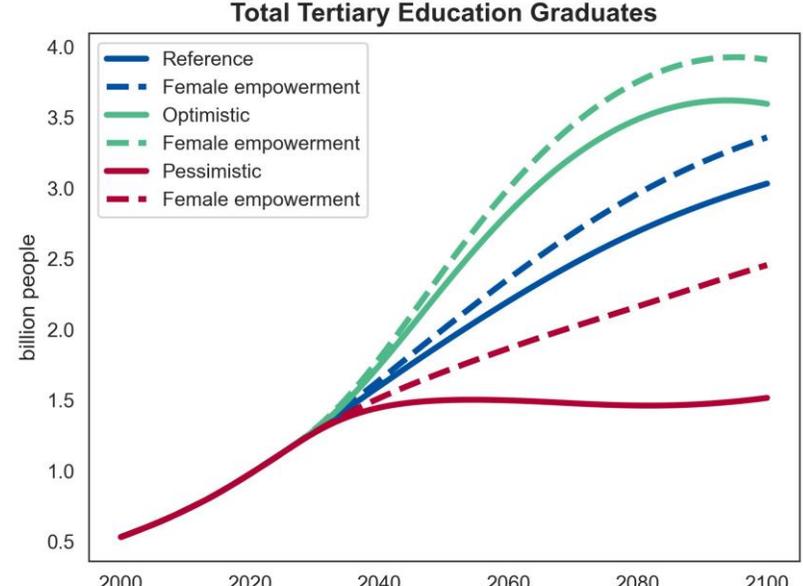
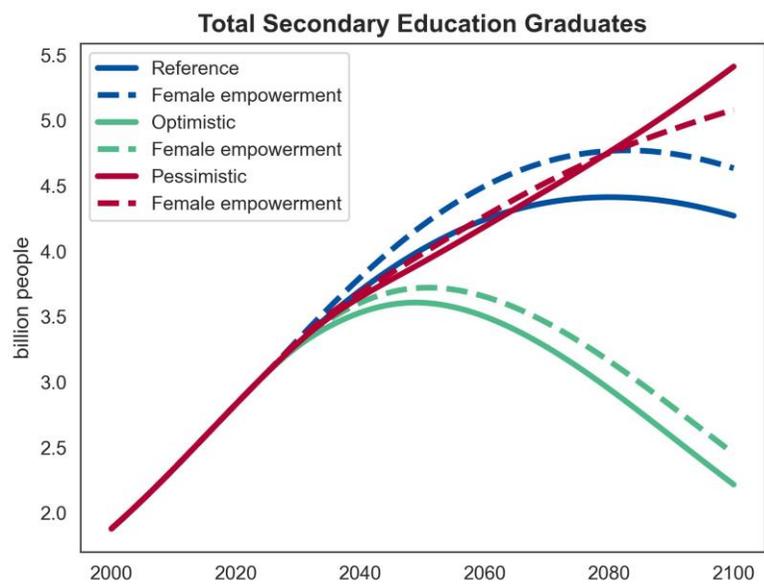
YoGL Projections

Female YoGL and its individual dimensions at age 20 with no climate damages

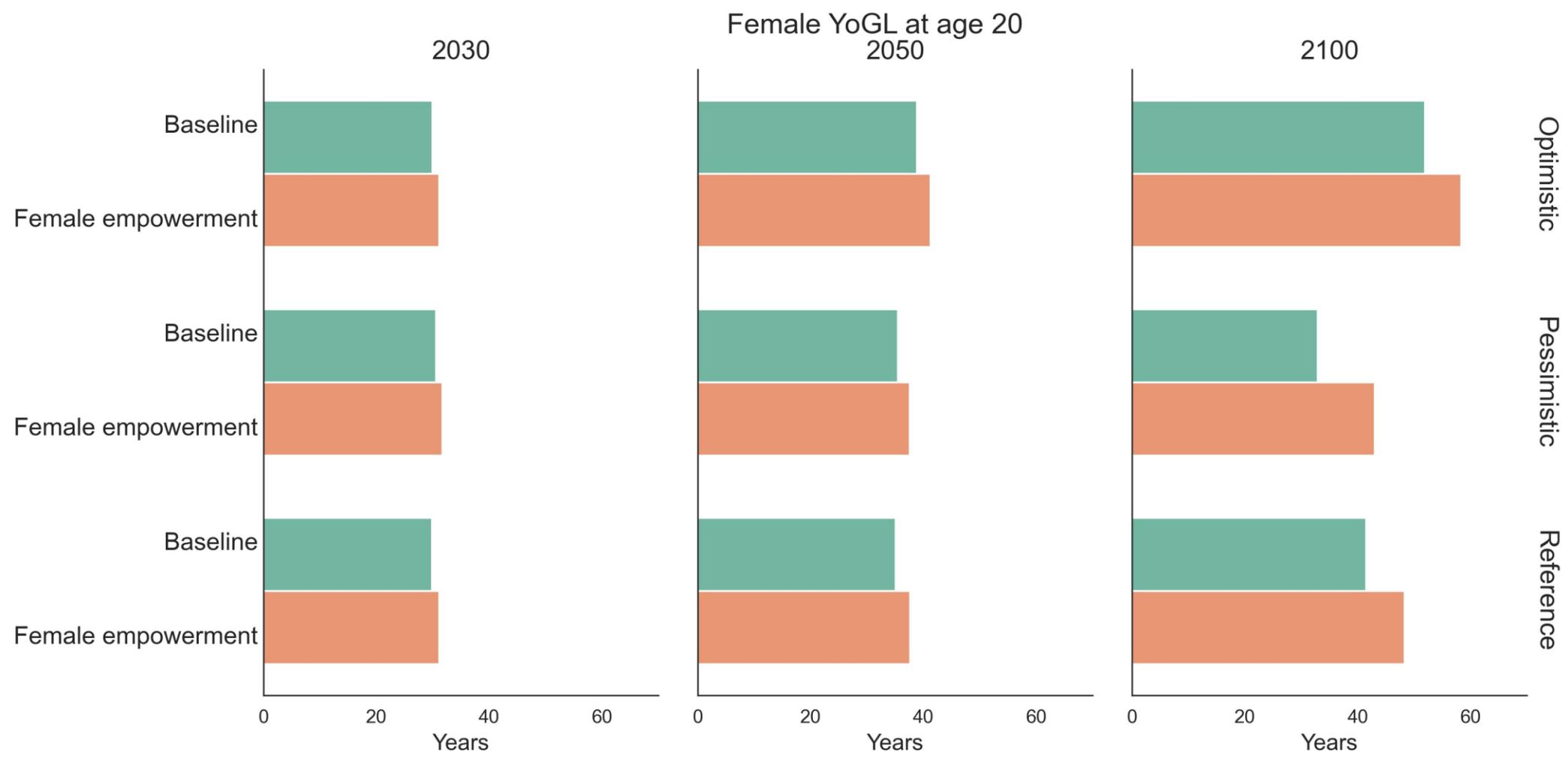


Female Empowerment

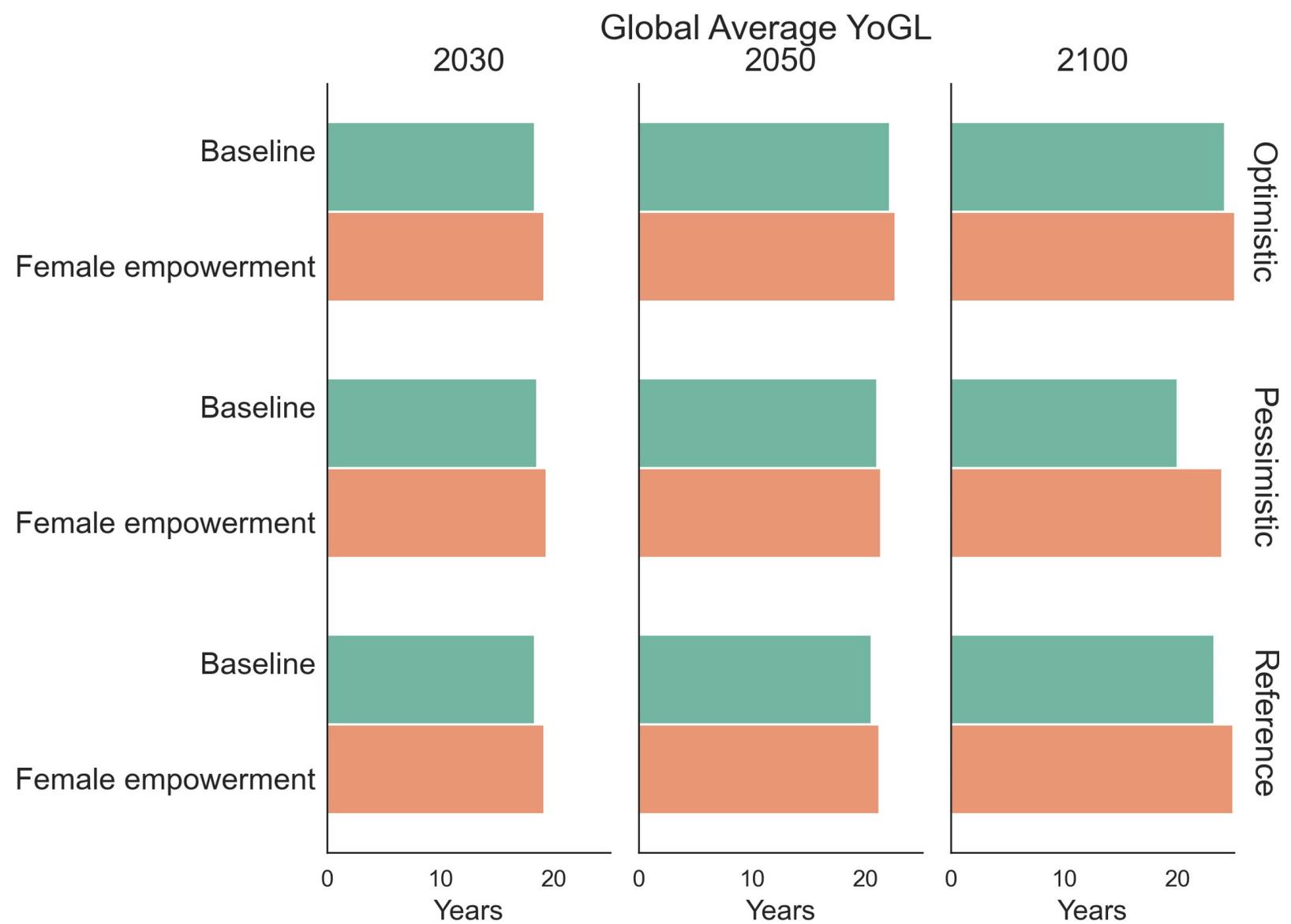
- (a) Female enrollment in primary and secondary education doubles by 2030
- (b) Female labor force participation increases, reaching 94% in 2030 for women aged 25–54, and 67.5% for women aged 55–64
- (c) Quality of secondary education increases, with “skilled” secondary education graduates increasing to 60%.

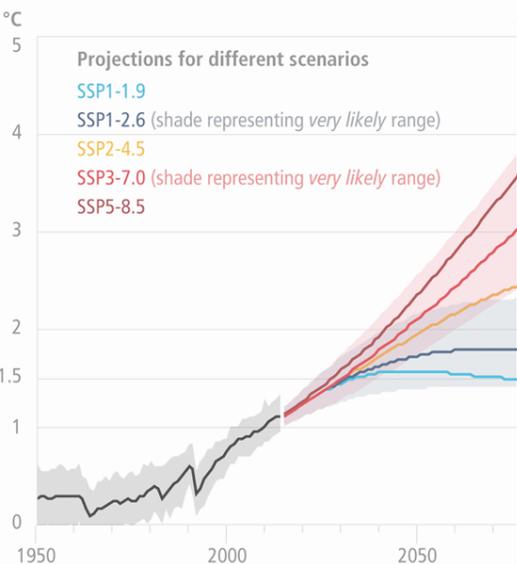


Female Empowerment



Female Empowerment





Human wellbeing in relation to climate, economy and environment

Sibel EKER (sibel.eker@ru.nl), Qi Liu,
Claudia Reiter, Michael Kuhn
IAMC Meeting 2023

Kuhn et al. (2023) Systems Analysis for Sustainable Wellbeing (eds. Lutz and Pachauri)

<https://github.com/iiasa/Felix-Model/>



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