

Health Impact Assessment of Future Maize Consumption Scenarios in Europe: A Risk-Benefit Case Study

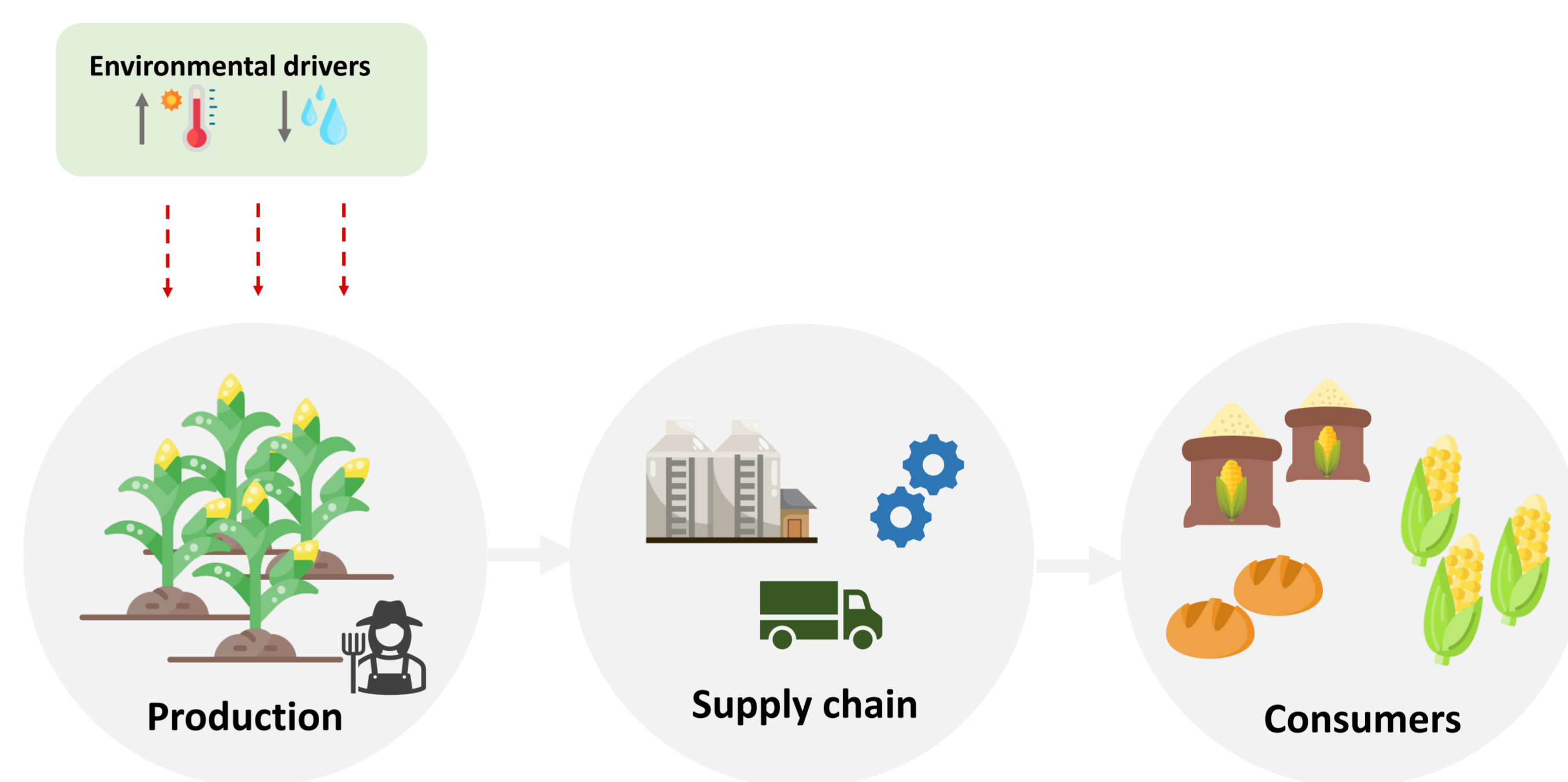
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Background

Increased consumption of whole grains, including maize, has been recommended as part of healthy and sustainable diets. Simultaneously, climate change is expected to influence the contamination of grains with mycotoxins. Due to increased temperatures, aflatoxin B1 and fumosins are predicted to become a food safety issue in Europe with maize being one of the most susceptible crops. Thus, weighing the benefits with (emergent) risks is imperative when estimating the health impact of maize food system in European populations.



From Farm-to-Fork: MaizeFood System and Environmental Drivers. Images from freepik.com



Like in Burden of Disease studies, quantitative RBAs may use Disability-Adjusted Life Years (DALYs) as population summary health metric.

Initially, the health impact will be estimated for France and Hungary.



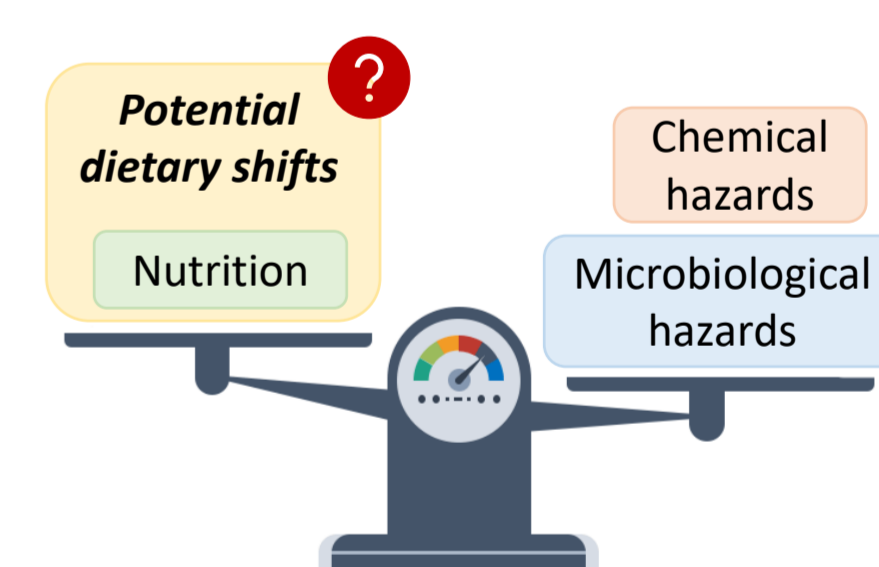
Methods

This Risk-Benefit Assessment (RBA) case study is ongoing and is part of the EU project HOLIFOOD.

The study will focus on evaluating the health impact of current (reference) and alternative scenarios based on:

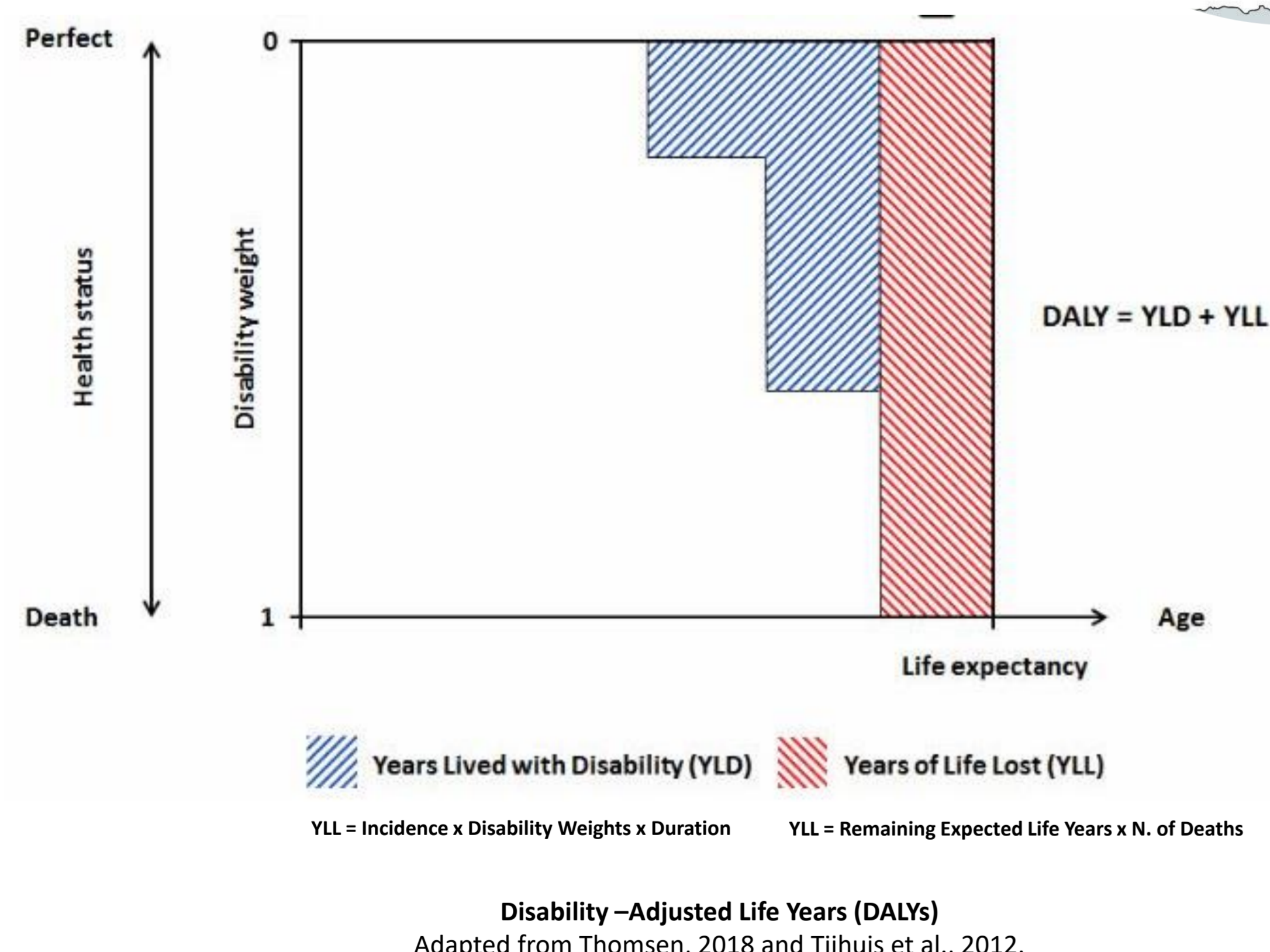
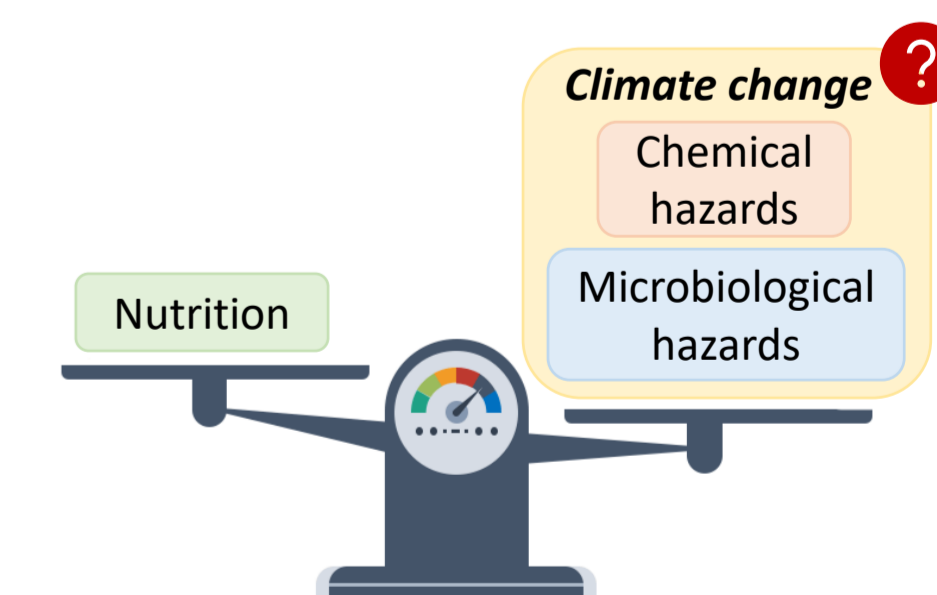
1) Increased exposure scenarios

Alternative scenarios will be based on increased amounts of maize in population diets, estimating potential impacts of emergent dietary transitions.



2) Prediction of future health impacts due to climate change

Outputs from climate-change predictive models will be used to forecast increase risks in the maize food supply.



Expected Outcomes

The outputs of this case study will contribute to the body of evidence on health impact of cereals and will demonstrate the applicability of RBAs of foods in different national contexts. It will also exemplify how **emergent risks can be incorporated in the assessment of trade-offs related to food safety and nutrition.**

Key Messages

- Emergent risks might impact risk-benefit balance of maize consumption scenarios in Europe
- Burden of disease methods are a fundamental element of RBA studies
- RBAs is a multidisciplinary framework and tool useful to inform food policy decisions

References:

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