

Introduction

- Indonesia is one of the largest rice producers globally, with a significant portion of its agricultural sector consisting of smallholder farmers.
- Many smallholder farmers face economic challenges, including low incomes and limited access to resources.
- In upland regions, there is growing potential for smallholder farmers to transition from rice farming to vegetable production.
- Transition to vegetables offers higher economic returns in the short term but its lasting prospects are uncertain and involve risks.

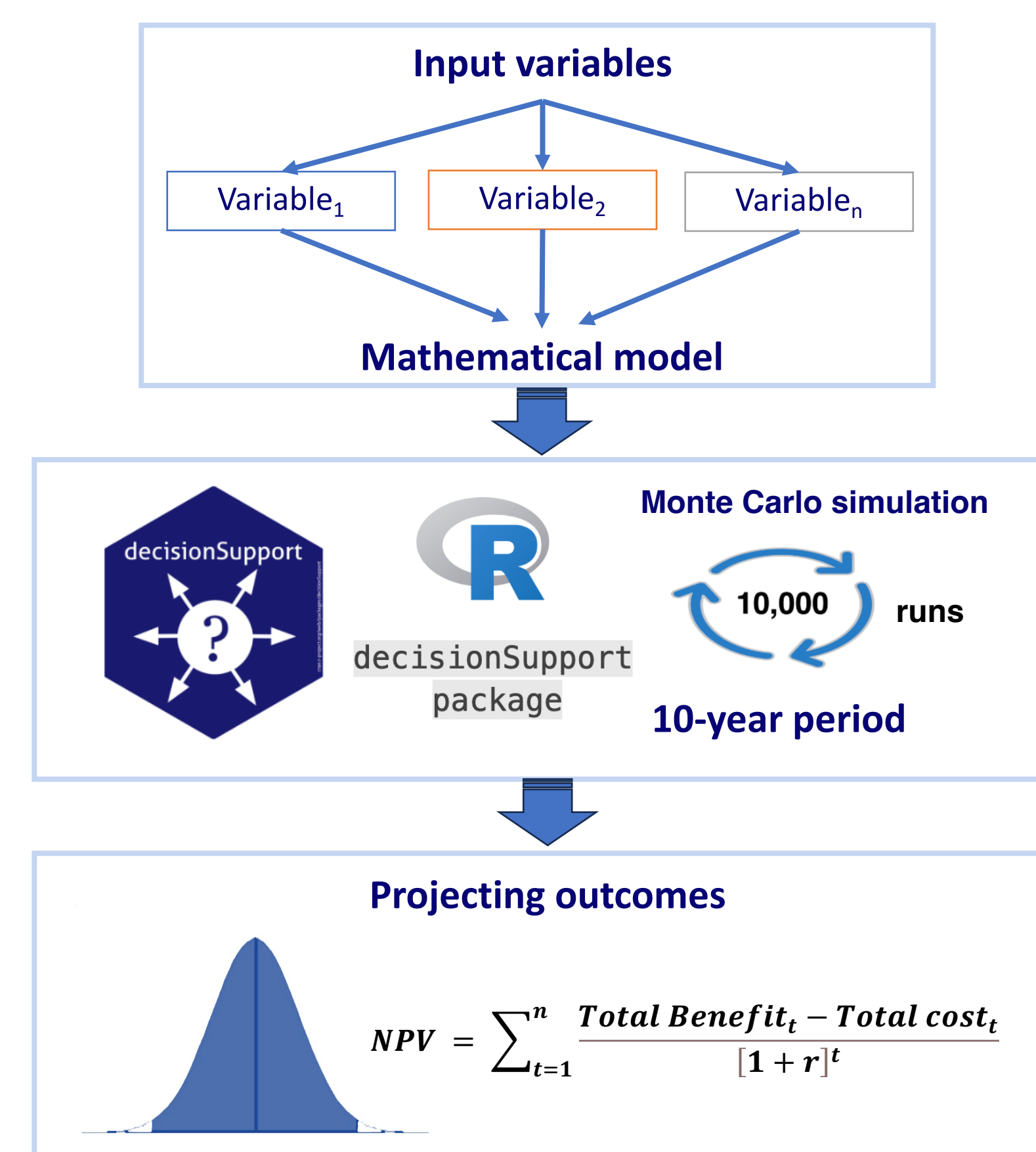
Objectives

- Analyze the **long term viability** of the decision by evaluating the economic, social and risk profiles of transitioning under various scenarios.
- Understand the **key factors** influencing the outcomes of rice to vegetable transition.
- Provide **recommendations** for farmers at the farm-level and policymakers at the landscape level to improve the decision-making process.



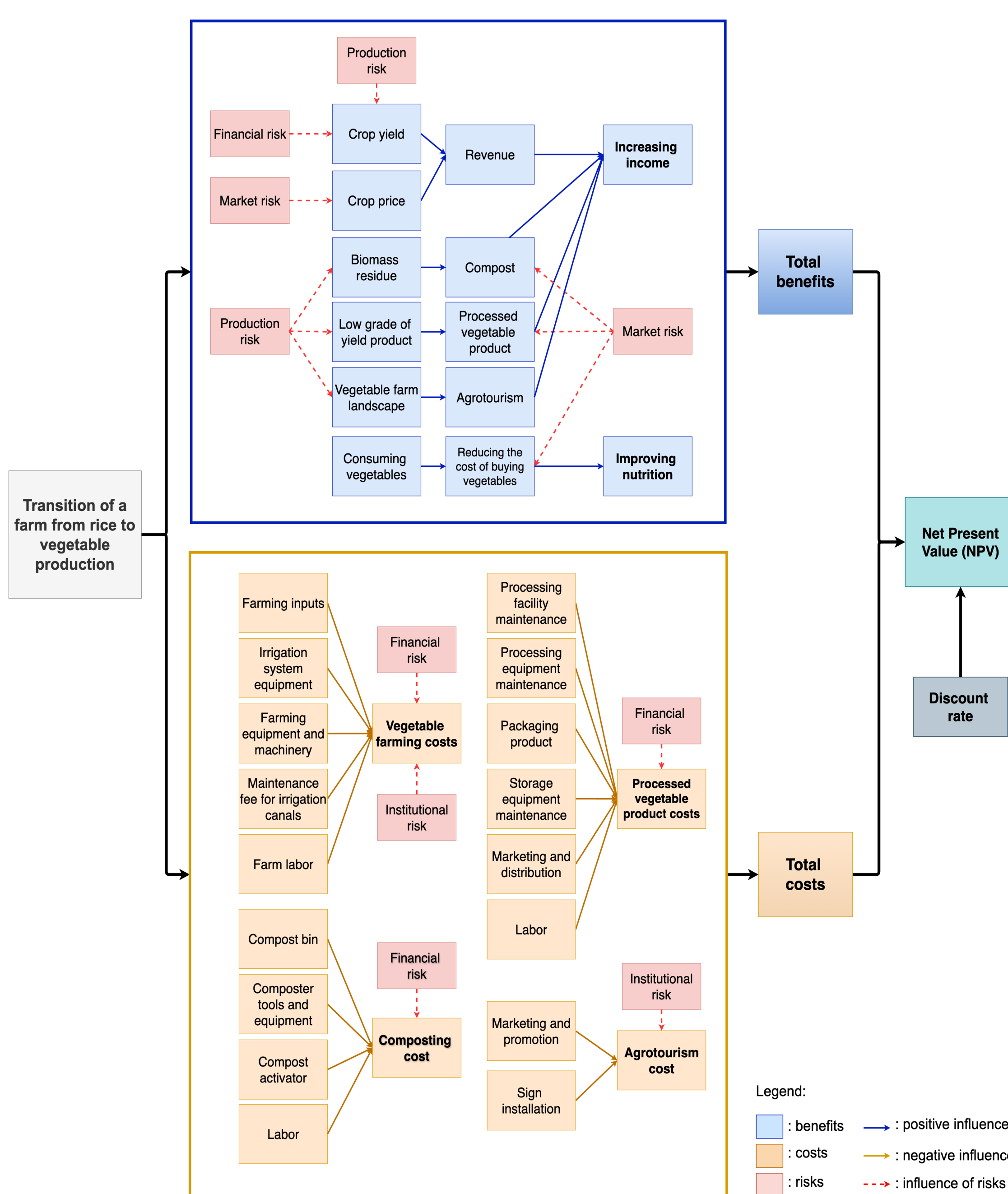
Methods

We used **decision analysis** method including stakeholder analysis and participatory approach, using "decisionSupport" package in R (Luedeling et al., 2021).

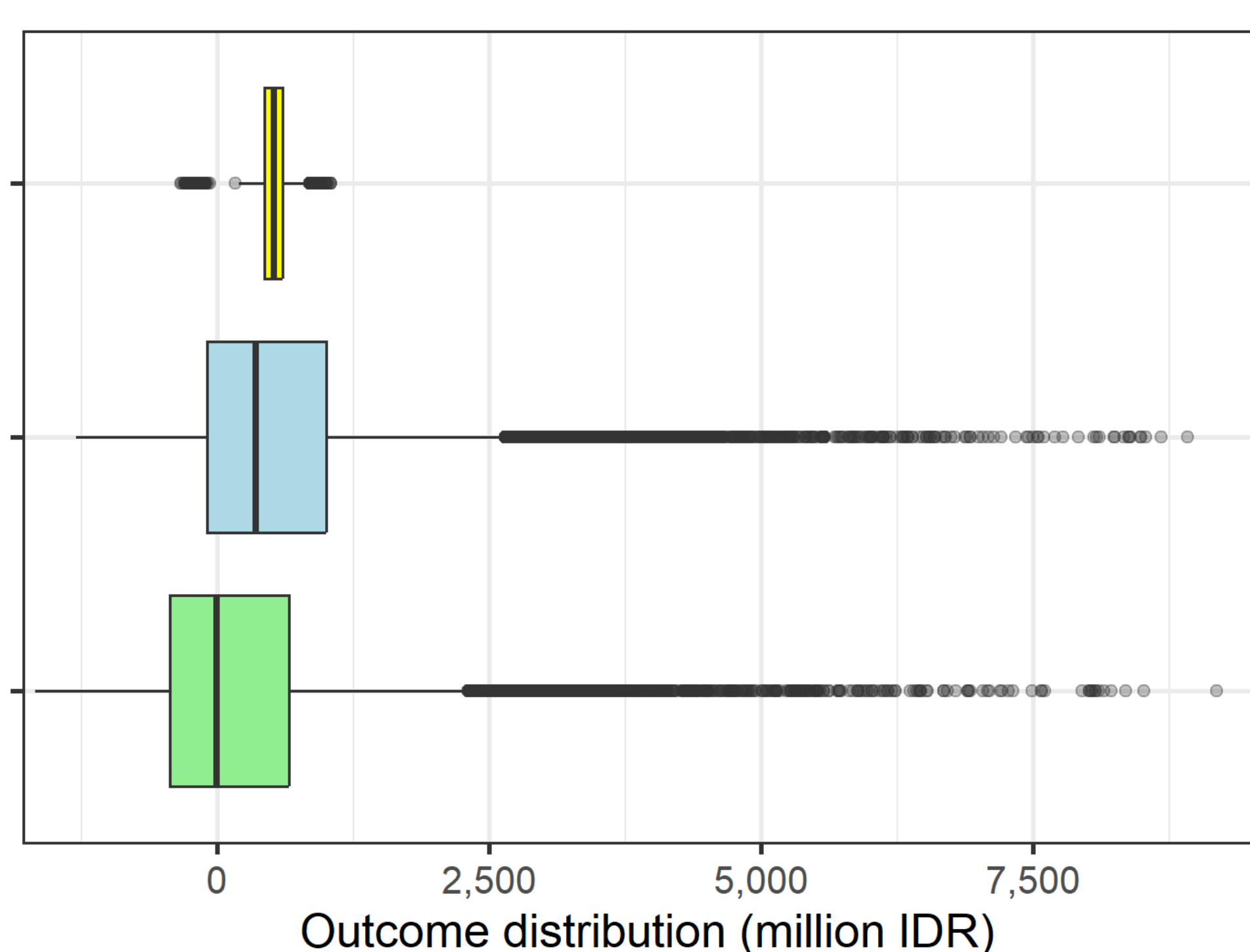


Results

Conceptual Model



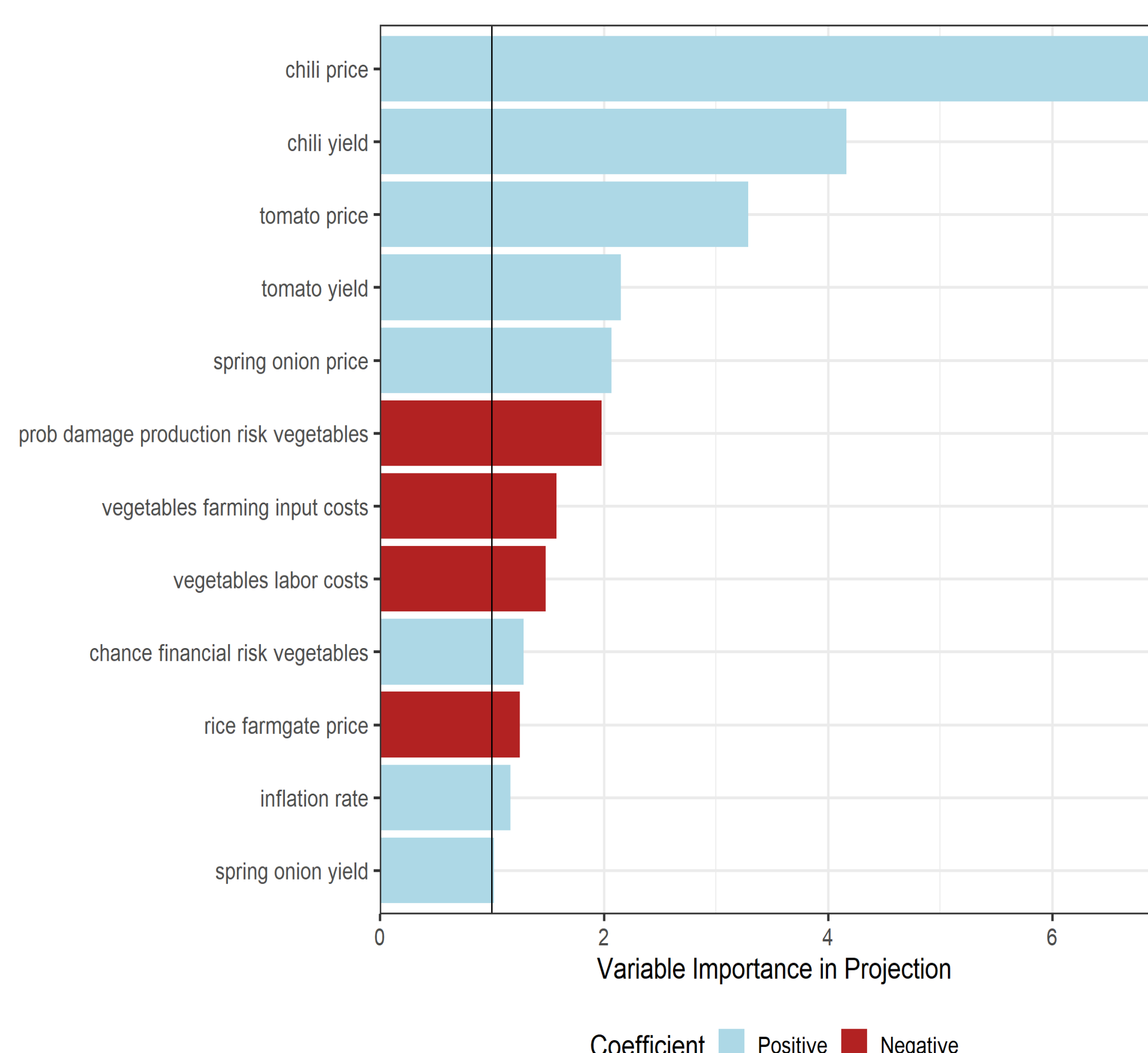
NPV distribution



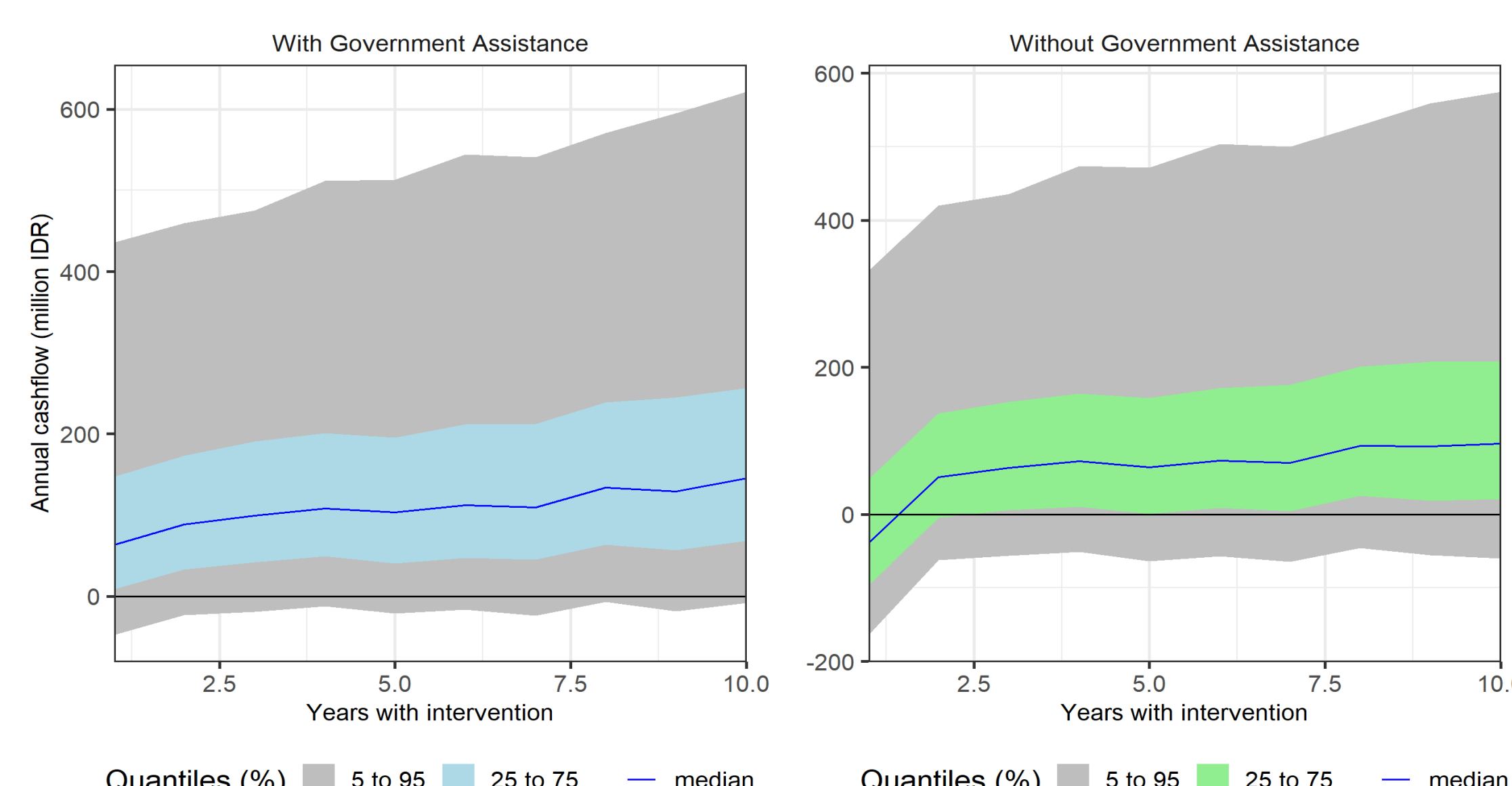
Decision option

- NPV rice (baseline)
- NPV vegetables decision do with gov assistance
- NPV vegetables decision do without gov assistance

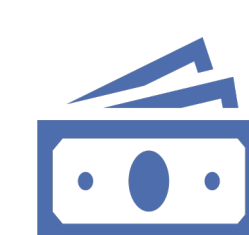
Variables Importance in Projection



Cashflow



Key Findings



Transition to vegetables is **feasible and profitable** in the long term. Government support can reduce first-year losses.



Key factors influencing the outcomes:

- Positive:** vegetable prices and yields
- Negative:** production risks, high costs, rice farmgate price.

Outlook



Farmers: Diversification strategies help stabilize income and reduce risks for vegetable farmers.



Policy makers: Provide support that equips farmers to build long-term self-reliance, rather than providing aid that fosters dependency



Future study: Engage more relevant stakeholders through interviews and explore additional scenarios for this farming transition.

Reference

Luedeling, Eike, Lutz Goehring, Katja Schiffrers, Cory Whitney, and Eduardo Fernandez. 2021. *decisionSupport: Quantitative Support of Decision Making Under Uncertainty*. <http://www.worldagroforestry.org/>.

Acknowledgement

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