

Trade-off analysis of climate resilience, healthy diets, market structure, and social inequality: foresight scenarios from 2020-2050 in Bangladesh

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- The study explores trade-off scenarios analysis of climate resilience, healthy diets, market structure, and social inequality as mix of uncertainties. It explores the impact of healthy diets policy on land use, water, soil quality, and GHGs emissions, farmers income, and affordability. It identifies plausibility of the food systems scenarios.

METHODS

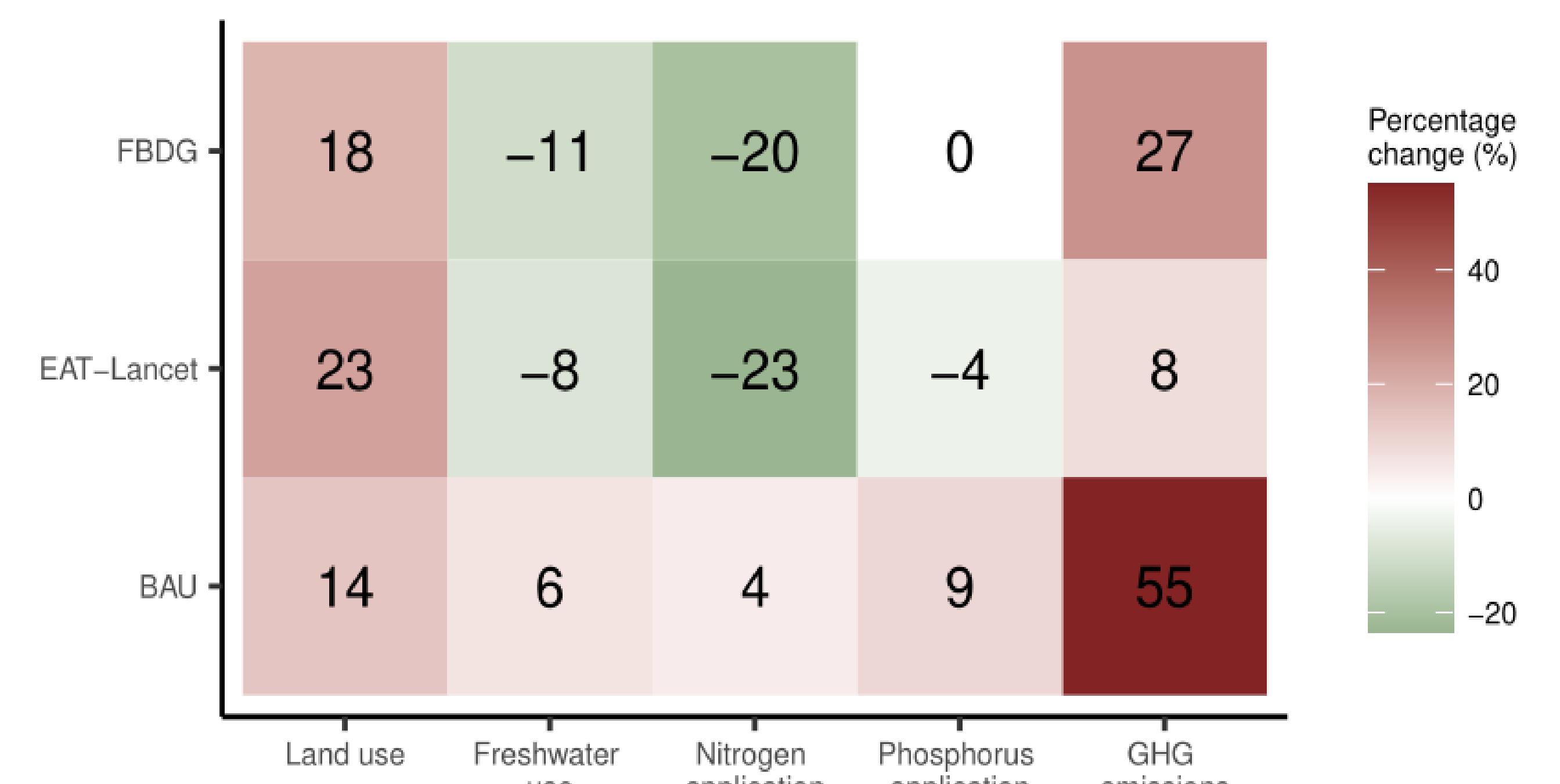
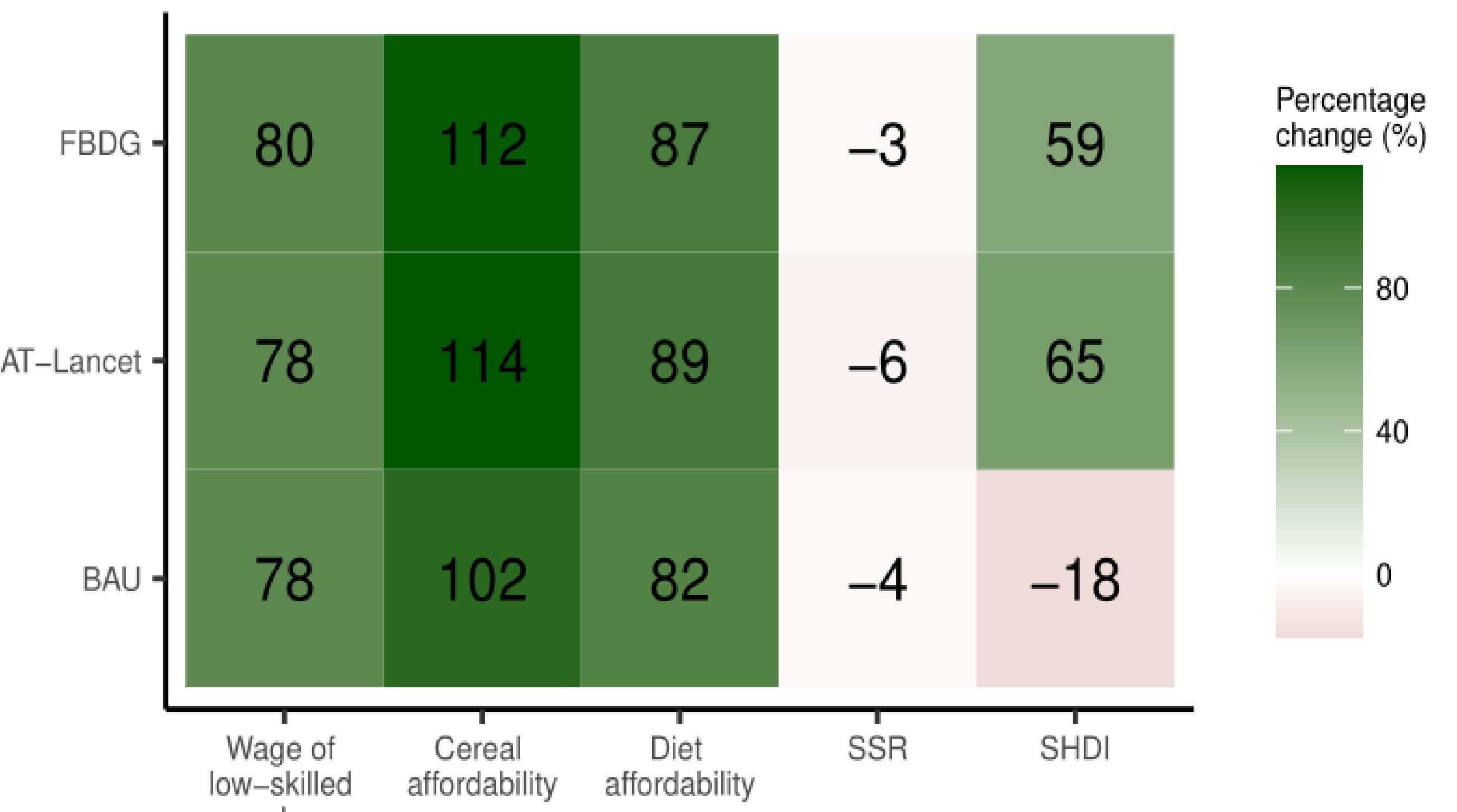
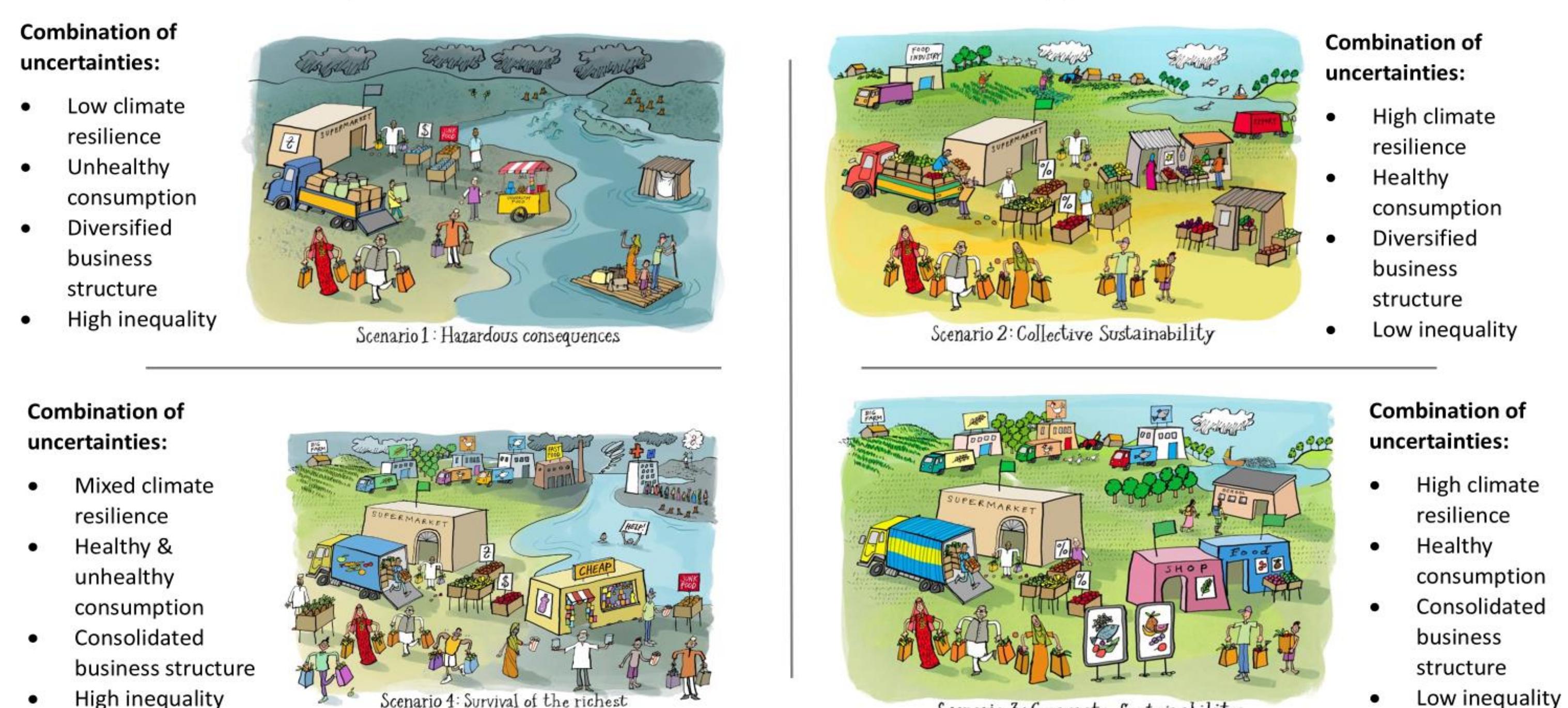
- The study used mixed methods to identify trade-off scenarios of climate resilience, healthy diets, market structure, and social inequality as combination of uncertainties. Using qualitative and human-centric design (HCD) with national level stakeholders in workshops, the study generates four plausible trade-off scenarios. For quantitative assessment, dashboard developed using the MAGNET (Modular Applied GeNeral Equilibrium Tool) model, three options were applied: business-as-usual (BAU) diet, EAT-Lancet diet, and Food-based dietary guideline (FBDG) diet. Study simulated impact of these three diets on land use, water, soil quality, GHGs emissions, farmers income, and affordability in 2050.

RESULTS

- Four trade-off scenarios of climate resilience, healthy diets, market structure, and social inequality are assessed with most desirable scenarios with the respondents. The results identified collective sustainability as the most desirable scenario, disregarding three other scenarios of hazardous consequences, corporate sustainability, and survival of the richest respectively. Data simulation analysis for 2050 shows that healthy diet implementation (EAT-Lancet and FBDG) produces better outcomes than that of BAU. BAU has the highest negative impact on land use, water use, soil quality, GHGs emissions considering the current diet pattern of Bangladeshi population.

Acknowledgement:

Future Food Systems scenarios 2050 (Foresight Scenarios)



CONCLUSION

- Scenario analysis and simulations imply the policy implications and prioritization of social and behavioral change communications (SBCC) and diet transformation in the coming years.
- Foresight study in Bangladesh needs to scale up with support from government agencies, development partners, UN agencies, and academic researchers. It requires collaboration, engagement, and partnerships.