



# Assessment of trade-offs and synergies in food system transition pathways in Ethiopia

Augustine Ayantunde, Asaah Ndambi, Mirjam Spoelstra, Abule Ebro and Jan van der Lee

## Practice brief

- **Case description**

This case study on trade-offs and synergies in dairy sector transformation in Ethiopia is building on previous KB35 project carried out in Ethiopia on exploring transition pathways for Ethiopia's dairy sector. The focus of this case study is on dairy sector transformation through doubling of milk consumption in 15 years (2022 to 2037) by low-income peri-urban and rural populations in Ethiopia. At the multi-stakeholder workshop held in April 2022 in Addis Ababa, Ethiopia, four transition pathways were identified for the vision of increased consumption of safe milk and dairy products in Ethiopia (Snel et al., 2022) under the previous KB35 project on exploring transition pathways for food systems. For this case study, the focus is on two transition pathways from the four identified at the two multi-stakeholder workshops in 2022. The two transition pathways (slightly modified) for increased consumption of safe milk and dairy products in Ethiopia are:

(1) Pasteurized milk for low-income consumers in peri-urban areas of Ethiopia. This could be sold in packages such as sachets or cups and by milk vending machines.

(2) Locally boiled (pasteurized) milk for the rural population with focus on vulnerable household members (pregnant and lactating women, and children under 7 years).

This case study is being carried out under SNV-led project entitled "Building Rural Income through Inclusive Dairy Growth in Ethiopia (BRIDGE)". A stakeholder workshop was held in Addis Ababa, Ethiopia on the 20<sup>th</sup> of October, 2023 to co-create methods for assessment of trade-offs and synergies for the two identified food systems transition pathways. The stakeholders involved in this case study are producers, producer organizations, rural and peri-urban consumers, dairy cooperatives, dairy processors, agro-input dealers, knowledge institutes, development partners, and public authorities.

- **Focus**

The envisioned future for dairy sector transformation in Ethiopia is doubling of dairy consumption in 15 years (2022 to 2037) by low-income peri-urban and rural populations by doubling milk production (in line with the Government policy of increasing milk production by 93% from 2020 to 2030). The focus of this case study is to engage stakeholders in co-creation of methodologies for assessment of trade-offs and synergies in dairy sector transformation in Ethiopia.

- **Trade-offs**

For the two identified transition pathways for this case study on dairy sector transformation, fifteen trade-offs were identified at farm, regional and national levels, and within/between different food system dimensions (environment, socio-economic, policy/institutional) which were discussed during the workshop and scored by the participants according to their level of importance to the two transition pathways. The scoring was done before and after intervention in the form of presentations on trade-offs and synergies in food systems.

- **Links to relevant websites**

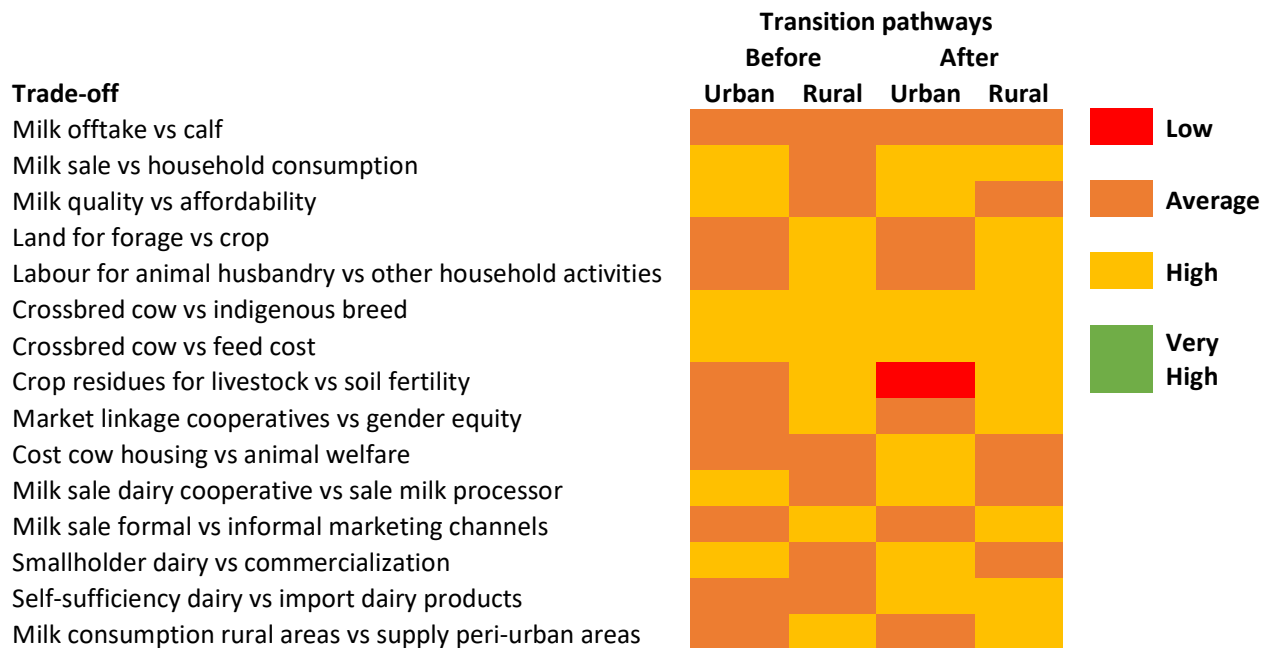
Snel, H., D.M. Vernooij and A.P. Bos, 2022. Dairy's contribution towards healthy and nutritious diets in Ethiopia: Exploring transition pathways for Ethiopia's dairy sector. Report WCDI-22-235. Wageningen Centre for Development Innovation, Wageningen, December 2022. Report WCDI-22-235. <https://doi.org/10.18174/583086>

KB35 Food and water security: <https://www.wur.nl/en/research-results/research-programmes/research-investment-programmes/food-security-and-the-value-of-water.htm>

Research on trade-offs and synergies: <https://www.wur.nl/en/research-results/research-funded-by-the-ministry-of-Inv/soorten-onderzoek/kennisonline/tradeoffs-and-synergies-scenarios.htm>

- **Results of stakeholders' workshop**

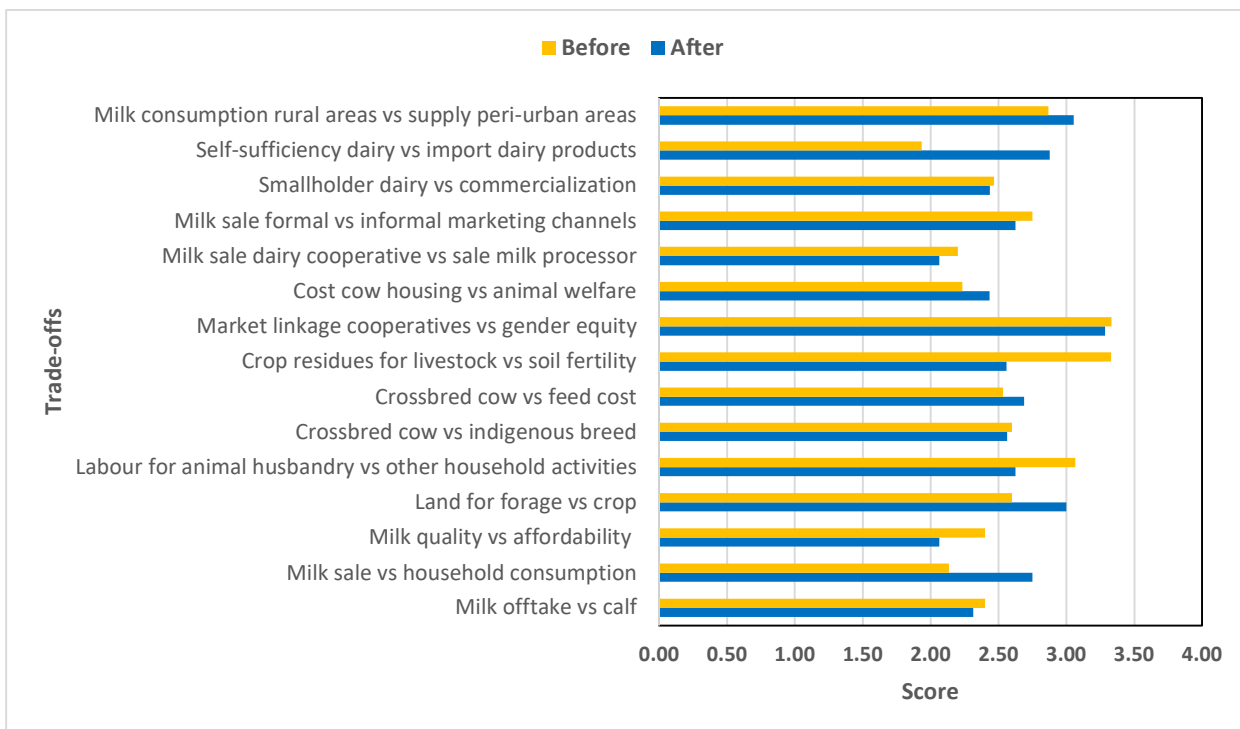
The results of the stakeholder workshop in Addis Ababa, Ethiopia on the 20<sup>th</sup> of October, 2023 to assess trade-offs and synergies in food system transition pathways are presented in visualized forms in Figures 1, 2a & b. Scoring of the level of importance of identified trade-offs before and after intervention (in the form of presentations and discussion) and synergies for the two transition pathways for increased consumption of dairy products in Ethiopia showed that co-creation processes influenced the opinions of the stakeholders (Figure 2a & b). The importance of trade-offs is transition pathways dependent. For example, the most important trade-offs for low-income urban consumers were self-sufficiency in dairy production vs import of dairy products, use of crossbred cow vs indigenous breed, and use of crossbred cow vs feed cost, whereas for vulnerable households in rural areas the most important trade-offs were market linkage through cooperatives vs gender equity, milk consumption in rural areas vs supply to peri-urban areas, land for forage vs crop (food-feed competition). The co-created methods with the stakeholders for assessment of trade-offs are presented in Figure 3.



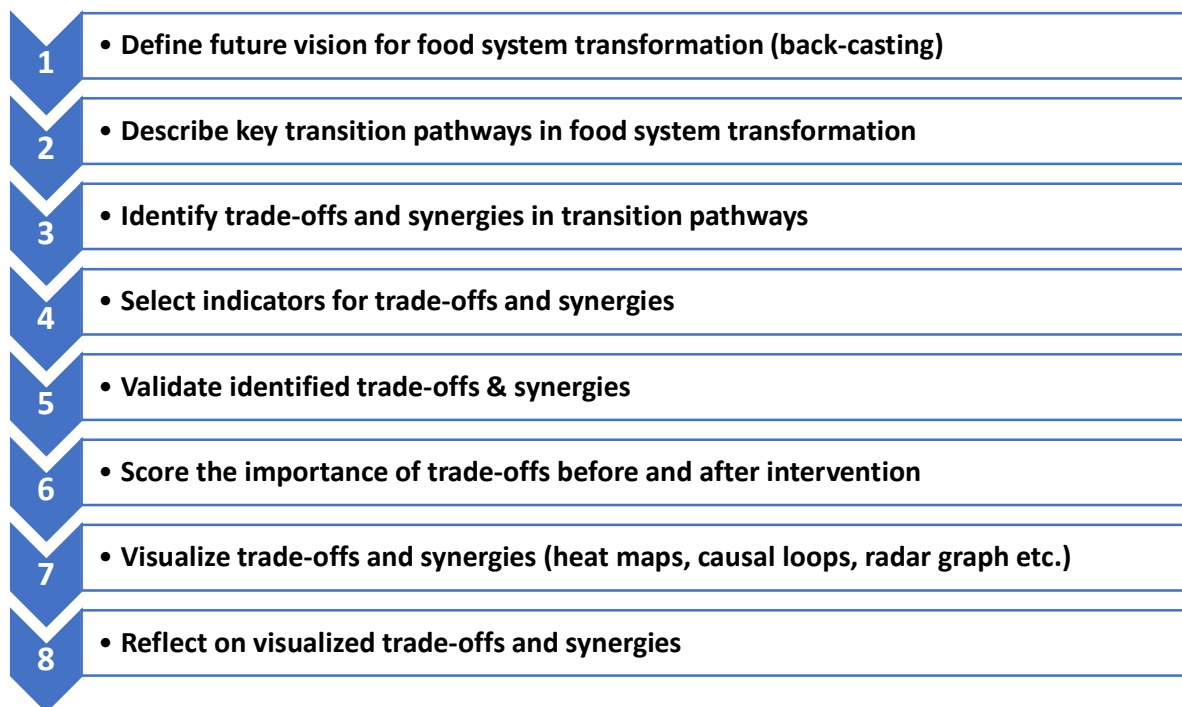
**Figure 1.** Heat maps of the importance of trade-offs to the two transition pathways based on scoring by the stakeholders



**Figure 2a.** Scores of importance of trade-offs before and after intervention for increased milk consumption by low-income urban consumers transition pathways



**Figure 2b.** Scores of importance of trade-offs before and after intervention for increased milk consumption by vulnerable households in rural areas transition pathways



**Figure 3.** Co-created methods with the stakeholders for qualitative assessment of trade-offs and synergies for the transition pathways of doubling dairy consumption in 15 years (2022 to 2037) in Ethiopia.

- **Lessons learned**

Some lessons learned from the co-creation of the methods for qualitative assessment of trade-offs and synergies in food system transition pathways are:

- (i) Stakeholder participation is central to co-creation processes of methods for assessment of trade-offs and synergies in food system transitions. Hence, it is important to have the right mix of stakeholders for a meaningful assessment.
- (ii) The importance of trade-offs is dependent on the transition pathways, which implies trade-offs will vary depending on the pathways.
- (iii) Co-creation processes influence the opinions of the stakeholders regarding the importance of different trade-offs for the identified transition pathways. Different scores by the stakeholders for the same trade-offs before and after presentation and discussion on trade-offs in food system transition pathways suggest that learning has taken place through the co-creation processes.
- (iv) Trade-offs in food system transition pathways tend to be focus of both quantitative and qualitative assessments compared to the synergies aspect which is less obvious compared to trade-offs.
- (v) There is a need to quantify the identified indicator(s) for each trade-off to strengthen the qualitative assessment to reduce subjectivity.