SCORAI-ERSCP-WUR Conference

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Transforming Consumption-Production Systems Toward Just and Sustainable Futures

BOOK OF ABSTRACTS

SCP23 is organized jointly by the following 3 organizations:

SCORAI
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About this document

Welcome to the abstract book for the SCP23 conference! This document serves as a comprehensive documentation of the intellectual contributions shared by our esteemed authors. It aims to provide guidance to conference delegates, allowing them to plan their own program and connect with relevant colleagues. We also want to encourage conference participants to explore the SCP23 OSF repository where full conference papers are published (osf.io/meetings/SCP23). We would like to emphasize that all rights regarding the intellectual contributions remain with the authors.

Please note that while we have endeavored to present an accurate schedule, changes may still occur. These changes could be due to unforeseen circumstances such as late cancellations or adjustments in chairs or rooms. We strongly encourage you to stay updated by following the conference communication on our website (www.scp-conference-2023.com), on-site notices, email updates, and our social media channels. For any inquiries or assistance, please do not hesitate to reach out to the conference organizers at contact@scp-conference-2023.com.

Wishing you a wonderful conference filled with insightful discussions and fruitful connections!

SCP23 Organizing Team

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The lack of diversity in plant species mobilized by household food acquisition in Brazil: a focus on ultra-processed foods and beef

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Introduction: Agrobiodiversity is key for supporting and diversifying agroecosystems, promoting healthy diets and moving towards more sustainable food systems. Conversely, monocultures and homogenous diets threaten the diversity of species available for human food, particularly those of plant origin.
Aim: This study aimed to investigate the impact of high and low patterns of ultra-processed food and beef acquisition by Brazilian households on the diversity of mobilized plant species.
Methods: The 2017-18 National Household Budget Survey data analysed in this study comprised of records of seven consecutive days of all foods and drinks purchased for home consumption. Household aggregates (n=575) were used as the analysis unit. The total amount of foods (kilograms) and beverages (litres) purchased per person per year was calculated. Next, food items were classified according to the Nova classification system into four groups: 1) unprocessed or minimally processed foods, 2) processed culinary ingredients, 3) processed foods, 4) ultra-processed foods. Food items classified as Nova groups 1 and 2 were directly identified at the species level by using taxonomical classification from four datasources. Ingredient lists from the UNC/IDEC/NUPENS national food label database were used to determine the composition of processed and ultra-processed foods. The percent composition of the ingredients was estimated and classified at the species level. The total amount of animal-sourced foods acquired by households were proportionally converted into the plant species utilised as feed inputs in their production. The Shannon diversity index was used to assess the diversity of plant species. Adjusted linear regression models were used to assess the association between acquisition patterns of high vs low quintiles of ultra-processed foods and of beef and the overall Shannon index of the plant species mobilized through Brazilian diets.
Findings: Only six species (brachiaria, maize, soybean, rice, sugarcane and wheat) accounted for more than 90% of the total amount of plant species mobilized by Brazilian household through their food purchases. This was reflected by a low average value of the Shannon index (which could range from 0=no diversity to 5.46=maximum diversity, i.e. if all the 235 mobilized plant species were evenly distributed) for the Brazilian population (H=0.87; 95%CI 0.85; 0.88), indicating low diversity. Household food acquisition patterns with the highest share of UPFs and

of beef (Q5) were associated with lower diversity of plant species mobilized. The Shannon index decreased by half when moving from a scenario with the lowest share of both UPFs and beef (H=1.22) to total food acquisition to a scenario with the highest share of both food groups (H=0.62).
Conclusions: Our findings demonstrate a low diversity of plant species mobilized by Brazilian households through their food purchases in 2017-18. Ultra-processed foods and beef played a key role in driving the low diversity of plant species that underlie Brazilian diets.