



## How are food system sustainability and its social dimensions addressed in the existing literature on food system sustainability assessment? A systematic literature review.



Hoang Thuy Tien<sup>1</sup>, Estelle Bienabe<sup>1</sup> et Genowefa Blundo Canto<sup>1</sup>

1) CIRAD, UMR Innovation, Montpellier



# PRESENTATION PLAN



**Introduction**



**Methodology and materials**

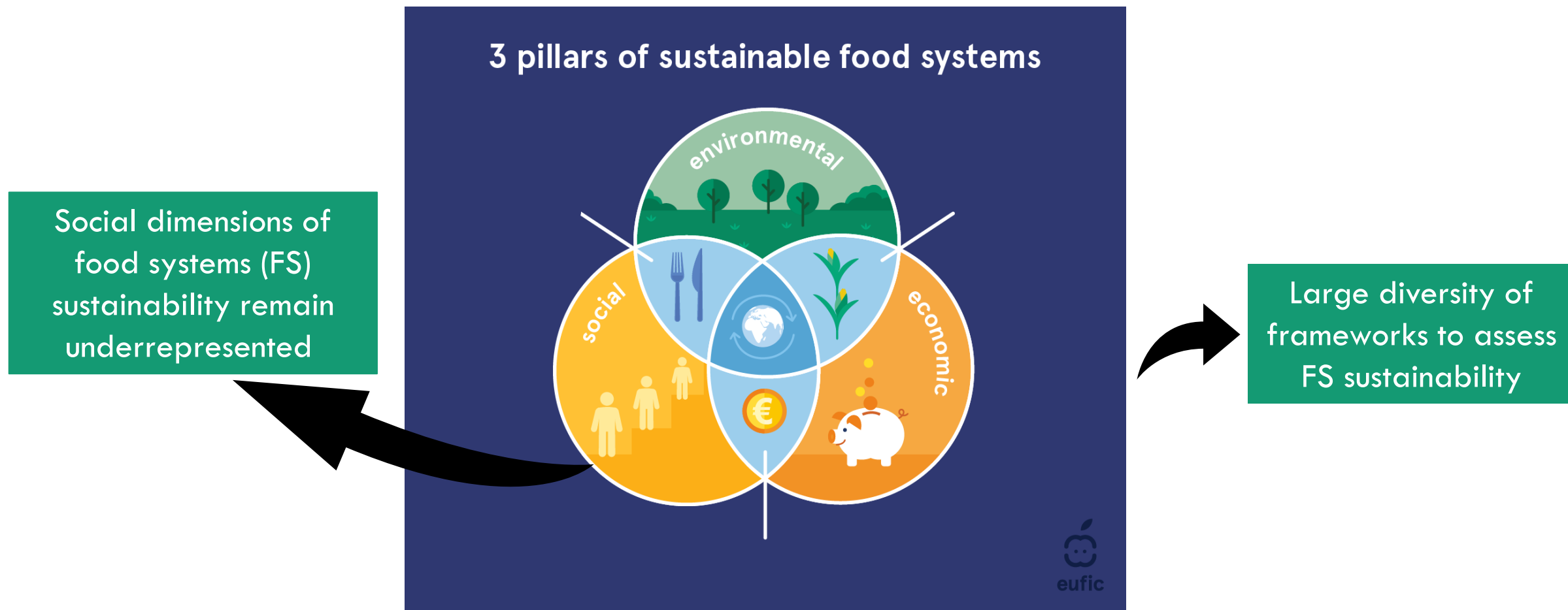


**Results**



**Discussion**

# INTRODUCTION - RATIONALE



# INTRODUCTION

## Research questions:

1. How is the sustainability of food systems assessed in the academic literature?
2. Which methodological frameworks are employed for empirical analysis?
3. How are the social dimensions considered and assessed?
4. Why are social dimensions underrepresented?



**Systematic literature review (SLR)**



# PRESENTATION PLAN



Introduction



Methodology and materials



Results

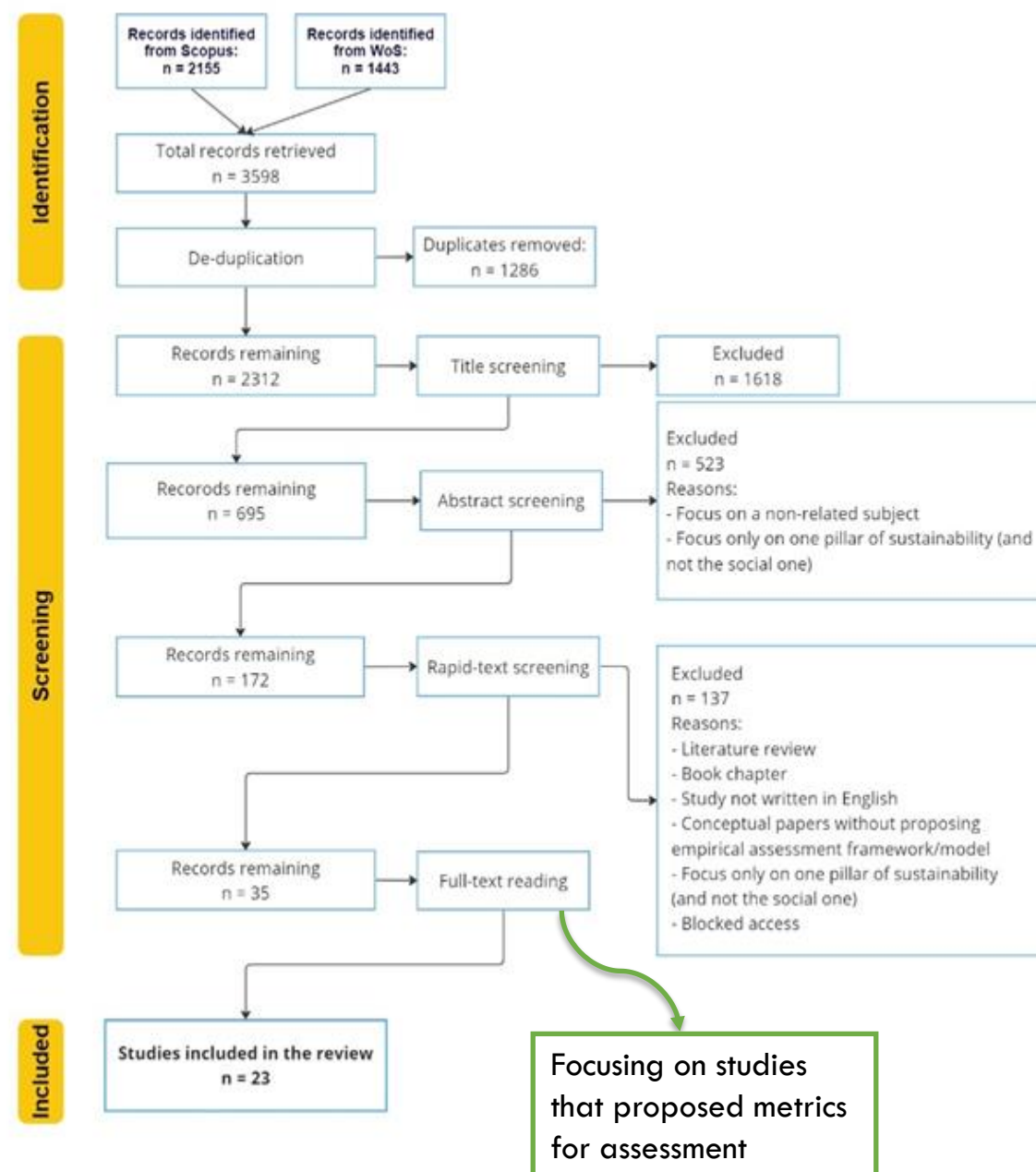


Discussion

# METHODOLOGY

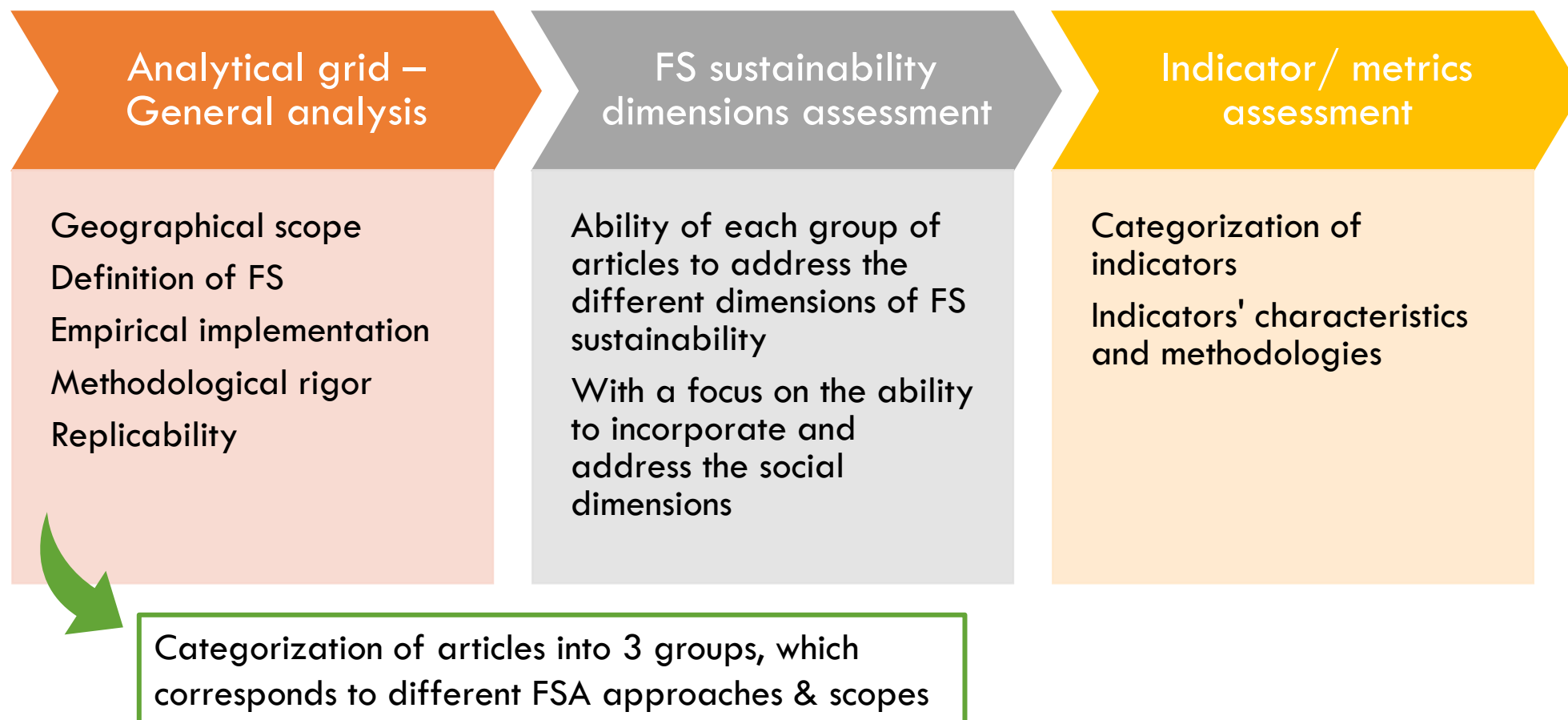
## DATA SELECTION

Search string	
<b>Term/Theme 1 (Population)</b> And	"food system*" OR "food-system*" OR "food shed*" OR "food-shed*" OR foodshed* OR "food ecosystem*" OR "food-ecosystem*" OR "agro-food system*" OR "agrofood system*" OR "agri-food system" OR "agrifood system"
<b>Term/Theme 2 (Exposure)</b> And	sustainab* OR resilien* OR viab* OR durab*
<b>Term/Theme 3 (Outcome)</b>	eval* OR assess* OR profil* OR dashboard* OR indicator* OR performance* OR metric* OR appraisal* OR measure* OR monitor*



# METHODOLOGY

## DATA ANALYSIS GRID — A TAILORED REVIEW APPROACH TO ACCOUNT FOR THE DIVERSITY OF FOOD SYSTEM ASSESSMENT (FSA) FRAMEWORKS



# PRESENTATION PLAN



Introduction



Methodology and materials



SLR Results



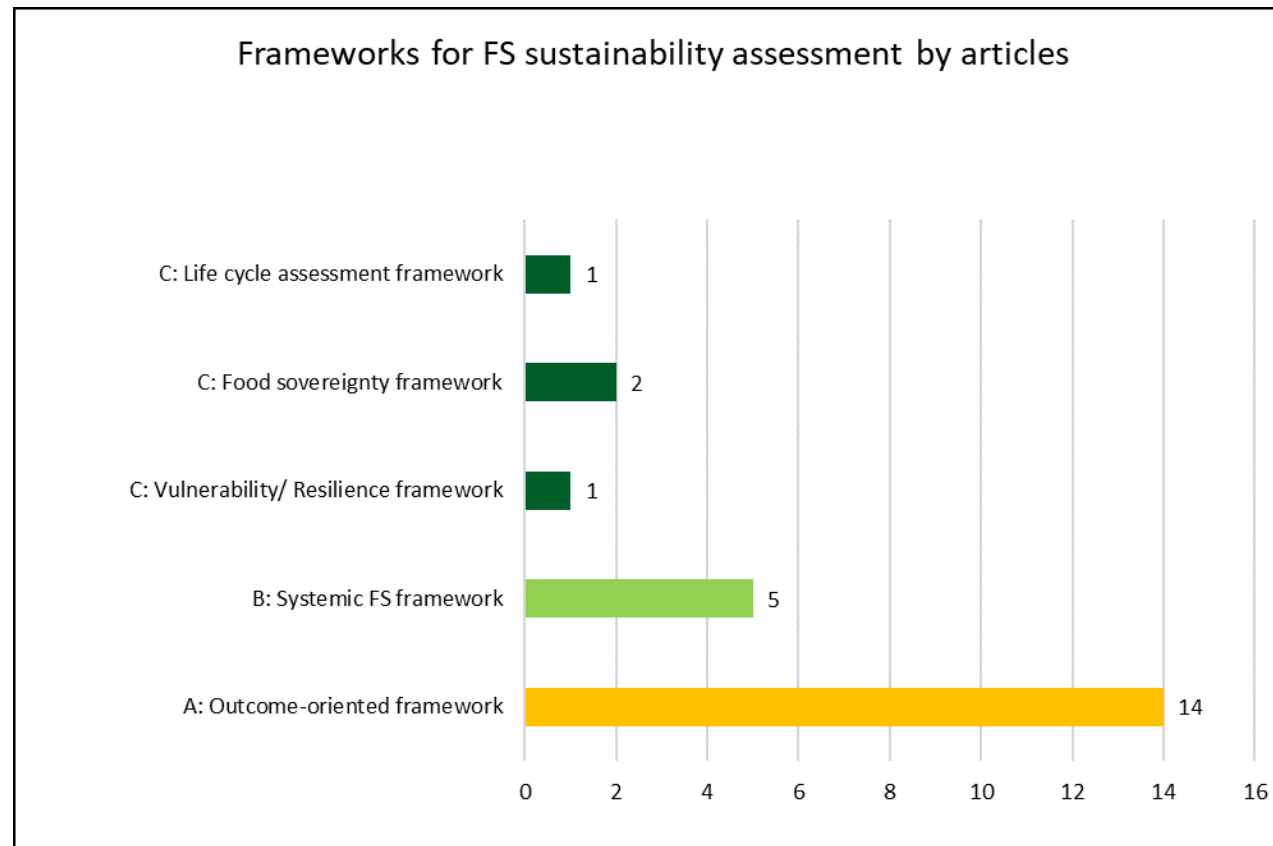
Discussion

# RESULTS

## CATEGORIZATION OF FRAMEWORKS

- ❖ Group A: Outcome-based frameworks
- ❖ Group B: Systemic FS framework
- ❖ Group C: Vulnerability/resilience of FS, Food sovereignty, Life cycle assessment of FS

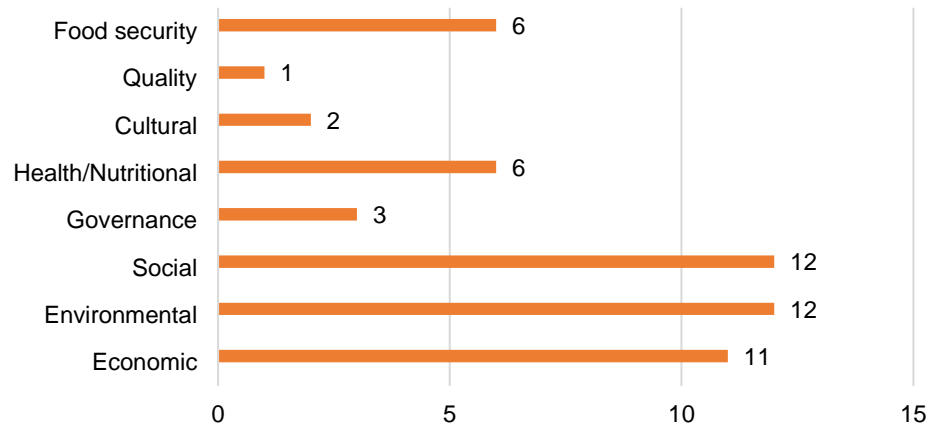
Frameworks from the group A and B are designed based on the FS framework presented by HLPE (2017).



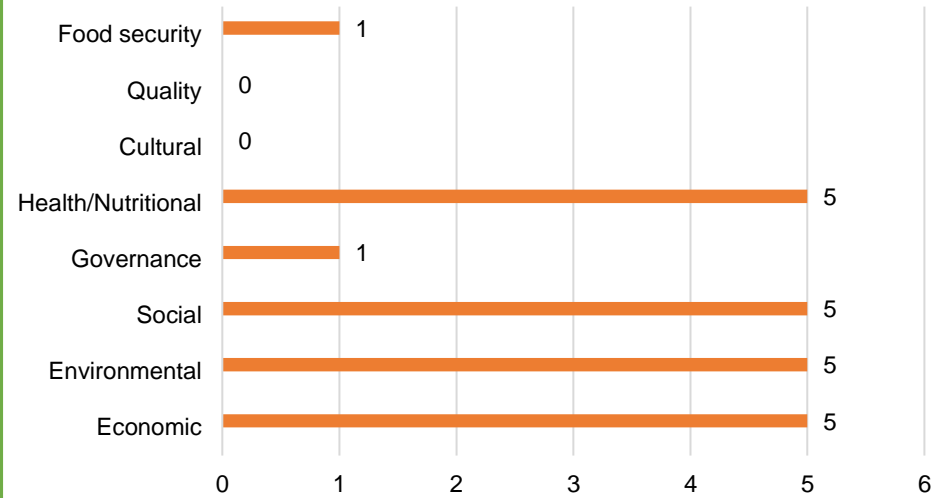
# RESULTS

## GENERAL ANALYSIS — SUSTAINABILITY DIMENSIONS

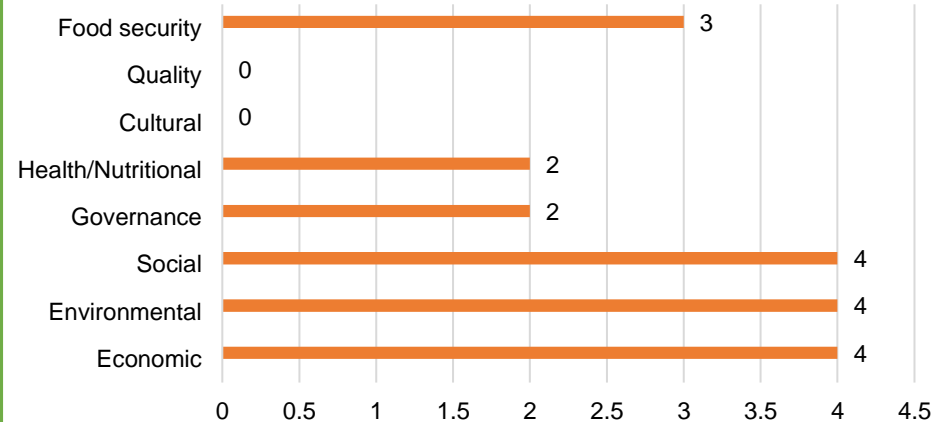
The sustainability dimensions addressed by the articles of the group A



The sustainability dimensions addressed by the articles of the group B



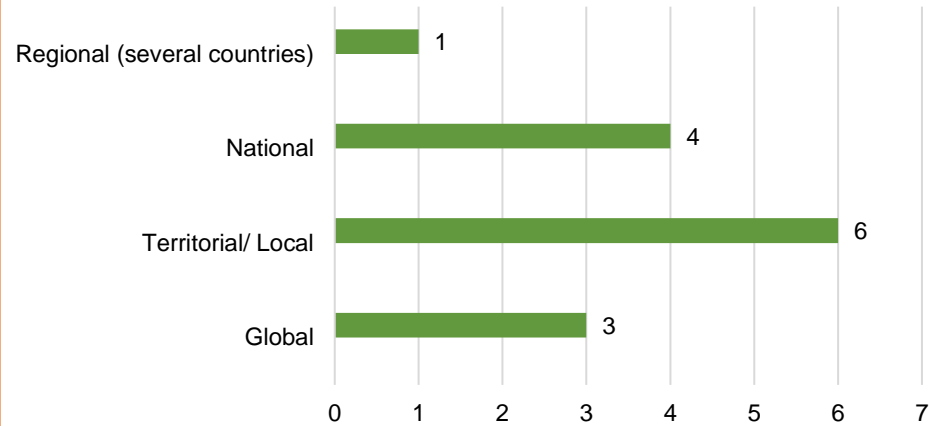
The sustainability dimensions addressed by the articles of the group C



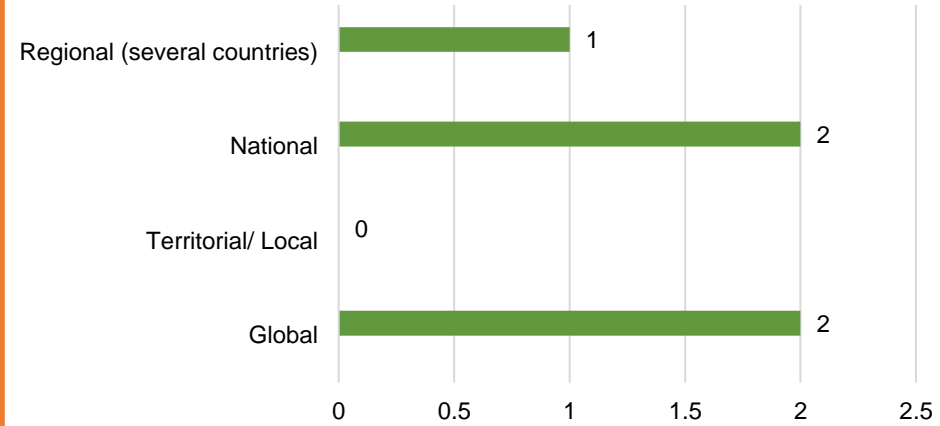
# RESULTS

## GENERAL ANALYSIS — GEOGRAPHICAL SCALE

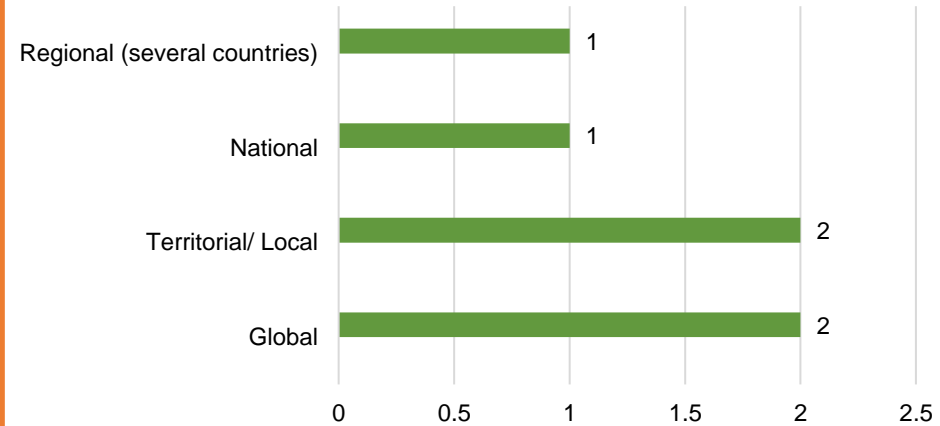
Different geographical scales of  
assessment by articles of group A



Different geographical scales of  
assessment by articles of group B



Different geographical scales of  
assessment by articles of group C



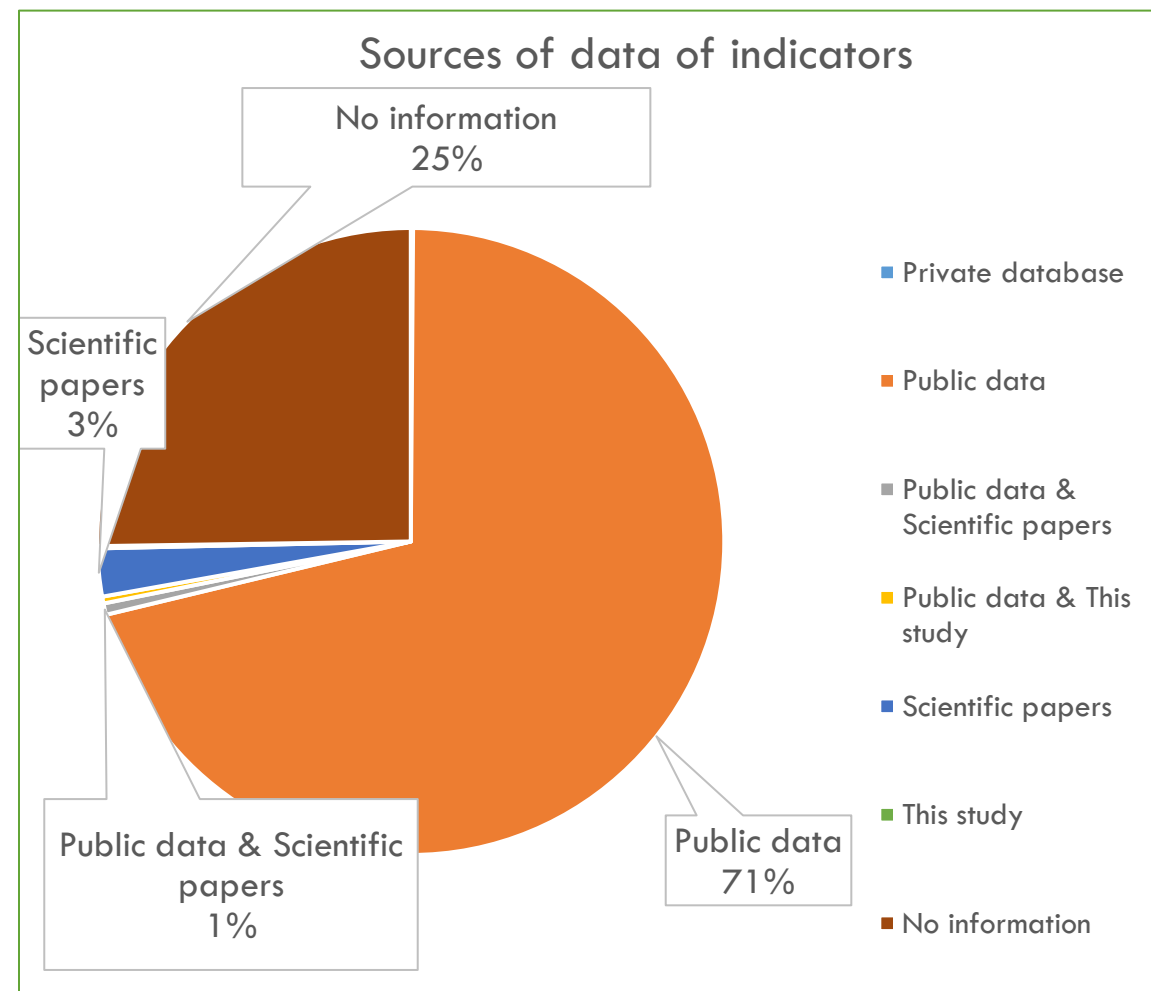
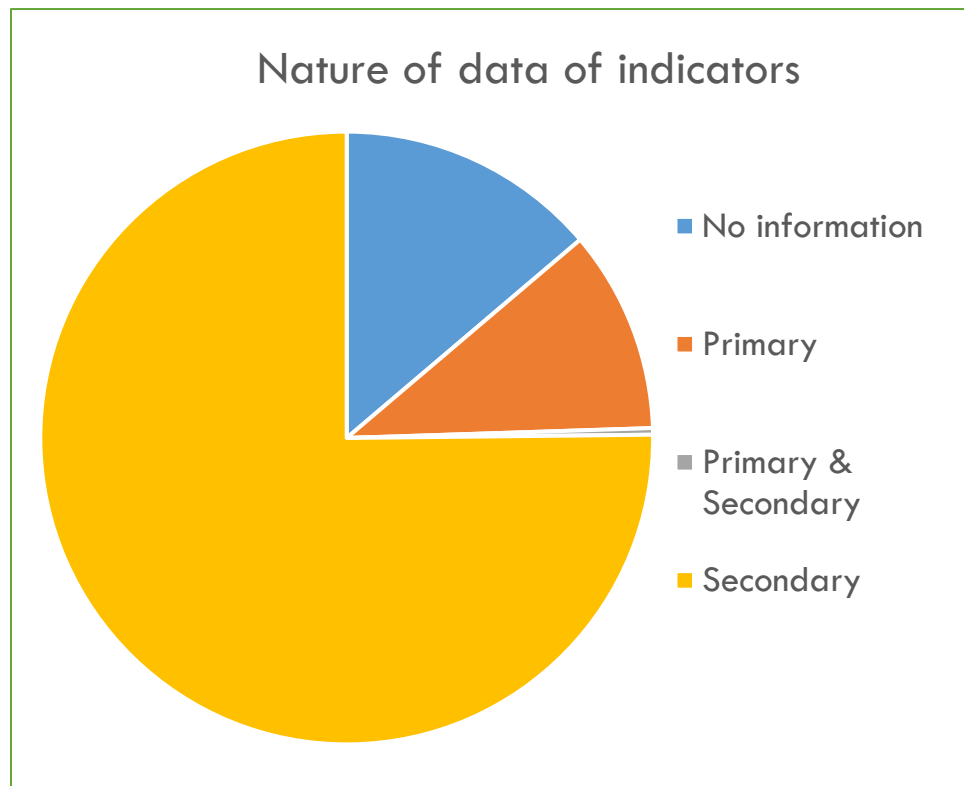
# RESULTS

## INTEGRATION OF SOCIAL DIMENSIONS IN DIFFERENT FSA FRAMEWORKS

Category frameworks	Integration of social dimensions
Group A	<ul style="list-style-type: none"><li>• <b>Food security</b> is a key component, with indicators like <b>availability, access, and utilization</b> linked to FS sustainability.</li><li>• Social dimensions include <b>poverty and inequality, gender equity, youth empowerment, and just and equitable food systems.</b></li><li>• Often <b>exclude: political participation, geographic inequality,</b> and marginalized groups like <b>ethnic minorities and refugees.</b></li></ul>
Group B	<ul style="list-style-type: none"><li>• Emphasis on social dimensions like <b>livelihoods, social equality, and inclusion,</b> particularly for <b>vulnerable groups</b> such as smallholders and women.</li><li>• Social dimensions are integrated not only as FS outcomes but also in components like <b>FS drivers and consumer behavior.</b></li><li>• Environmental outcomes and food and nutrition have the highest number of suggested indicators, with <b>social outcomes underrepresented</b> due to <b>sustainability focus</b> and <b>data limitations</b> at the national level.</li></ul>
Group C	<ul style="list-style-type: none"><li>• Vulnerability/Resilience Approach: focus on food security and nutrition.</li><li>• LCA: focus on social dimensions like food affordability, labor conditions but <b>lacks a comprehensive approach</b> to social inclusion</li><li>• Food sovereignty: Offers a <b>more socially inclusive approach,</b> focusing on empowering <b>marginalized groups, smallholders, and women.</b> Advocates for <b>gender equity.</b></li></ul>

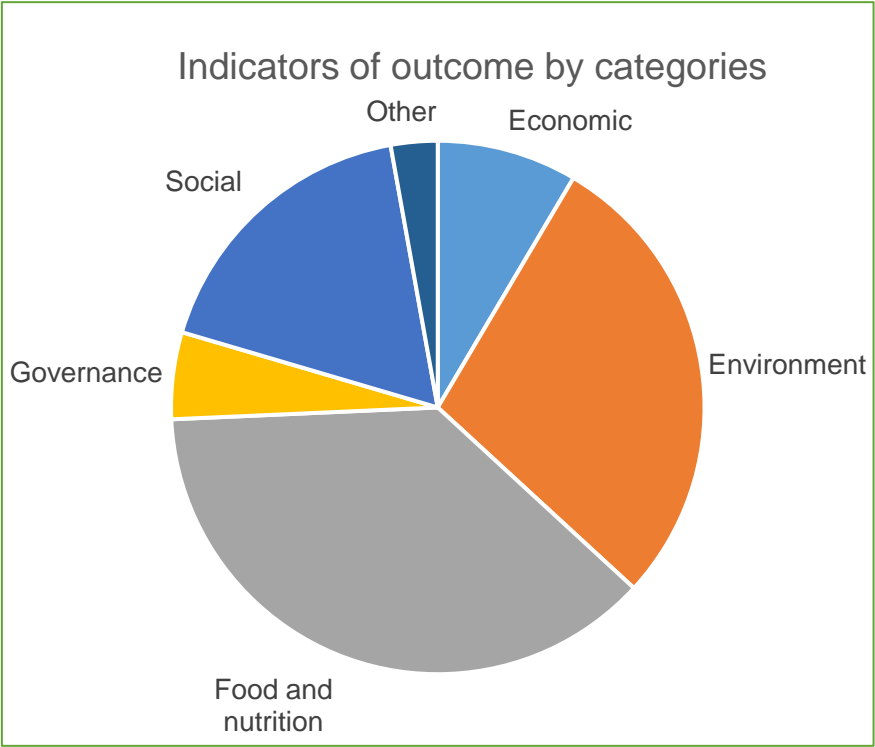
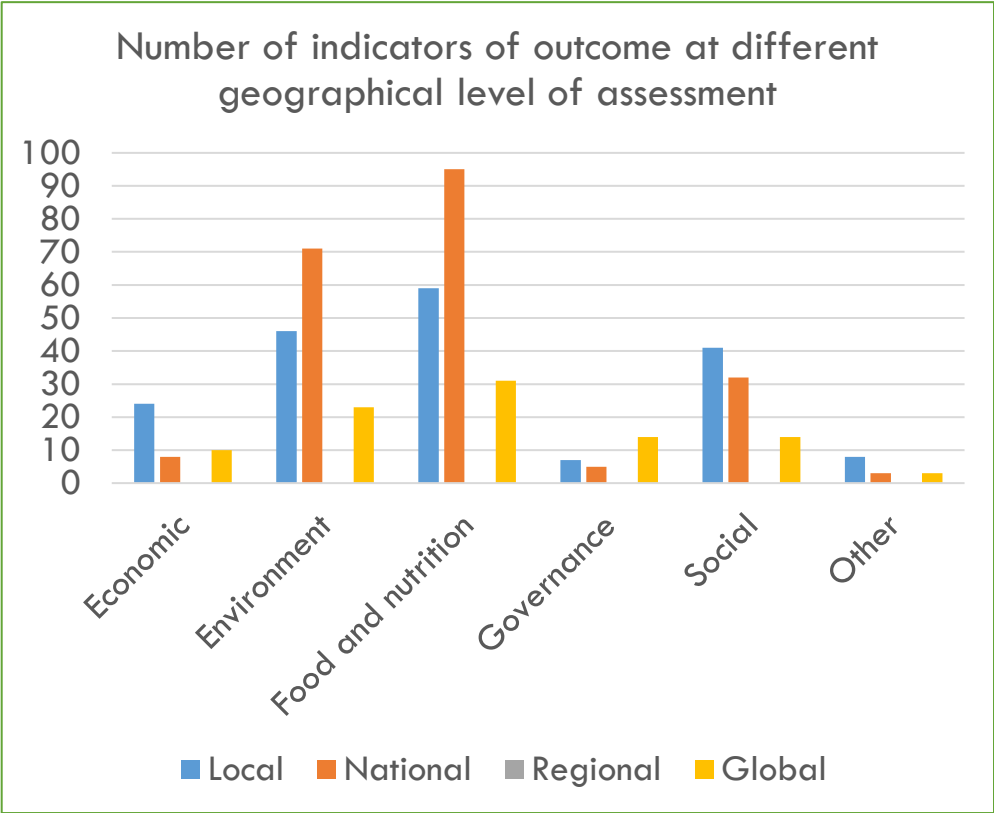
# RESULTS

## INDICATOR ASSESSMENT



# RESULTS

## INDICATOR ASSESSMENT



# PRESENTATION PLAN



**Introduction**



**Methodology and materials**



**SLR Results**



**Discussion**

# DISCUSSION

- ❖ The significance of categorizing the FSA into 3 groups: facilitating the understanding and implications of the different conceptual frameworks and methodological methods in their capacity to address sustainability:
  - ❖ Particularly in examining the consideration of social aspects and their underrepresentation across various frameworks and methodologies.
- ❖ HLPE-based frameworks are more widely used and more practical for empirical assessment (groups A&B), while conceptually, social dimensions are better considered in some Group C frameworks but so far, lack of empirical implementation in terms of indicators/ metrics
- ❖ Broad-scale assessments use a limited set of publicly available indicators (e.g. gender inequality, child labor) due to data challenges, often underrepresenting social sustainability.
- ❖ Local-level assessments are more effective in addressing social sustainability by focusing on social inclusion, knowledge sharing, and community involvement, offering a broader perspective on social aspects. However, they are more data- intensive and resource/time-consuming.

# DISCUSSION

- ❖ Broader social concerns such as political participation or rural empowerment are often underrepresented.
- ❖ **Nexus Food Security and Nutrition, Livelihoods and Social Dimensions:**
  - Food security and social sustainability have key interconnections, that can be hard to separate in assessments, and are in some cases overlooked
  - Social factors such as equity, access, and justice heavily influence food security and nutrition => key aspects of social sustainability.
- ❖ **Methodological Issues and Data Availability Limitations:**
  - Lack of transparency in indicator selection appears to be a common feature even in academic literature, limiting the reproducibility in FS sustainability assessments and capacity to capitalize/ consolidate data.
  - Studies heavily rely on secondary data, with few studies using primary data
  - Data availability limits the scope of social sustainability indicators and hence, the proper integration of the social dimensions into FSA - focus on what is already measured (e.g. gender inequality, child labor) => lack of concrete innovative methods/ research work on how to overcome this significant weakness/ flaw of FSA.

# CONCLUSION

- ❖ Most frameworks acknowledge the importance of social dimensions.
- ❖ However, their assessments are constrained by data limitations, lack of innovative concepts, and insufficient emphasis on marginalized populations.



## Key recommendations:

- ❖ Invest in data collection and infrastructure to address gaps in social indicators.
- ❖ Promote participatory and inclusive methodologies to better represent diverse perspectives and local realities.
- ❖ Focus on marginalized groups and systemic inequalities to ensure that social sustainability is not overlooked in food system assessments



Agroecology and  
Safe Food System  
Transitions

LEARN MORE | ស្វែងយល់បន្ថែម | ຮຽນຮູ້ເພີ່ມເຕີມ | TÌM HIỂU THÊM

THANK YOU !

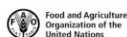


Agroecology and Safe Food System Transitions in Southeast Asia (ASSET)

វិវឌ្ឍនាការកសិកម្មធូលី និងប្រព័ន្ធស្បៀងអាហារសុវត្ថិភាព

ການປັບປຸງລະບົបນិເວດກະសិកា ແລະ ຄວາມປອດໄພຂອງ ອາຫານ

Chuyển đổi Nông nghiệp sinh thái và Hệ thống Thực phẩm An toàn



Funded by:



18<sup>èmes</sup> JRSS - Reims - 5 et 6 décembre 2024