



# Sustainability assessment of vegetables farms in Benin: preliminary results

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Strengthening vegetable food system in Benin, Burkina Faso and Mali  
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# From staple food crops to resilient agrifood systems



# Context

- Increased consumption of fruits and vegetables is important to move toward healthier and more sustainable diets
- Need to align quality with regulations and consumers expectations
- Sustainability, a complex concept: satisfying food production, environmental protection, economic viability and social acceptance objectives
- Knowledge on the sustainability of the vegetable production system is limited



# Objectives

- Assessing the sustainability of vegetables production system in Benin
  - Assessment of farmers' perception on on-farm sustainability in vegetable production systems
  - Development of a matrix of indicators to assess the sustainability of the vegetable production system adapted to Benin;
  - Mapping the vegetable production system in terms of sustainability in Benin
  - Propose strategies to strengthen the sustainability of small-scale vegetable farms in Benin



# Farmers perspective on sustainability

- Farmers perspective on sustainability:
  - Soil fertility

*"A vegetable farm is sustainable when the land on which farming is practiced is fertile enough to continue the activity for a long time".*
  - Finance

*"Sustainability can be seen in the financial aspect, because if you produce but are unable to sell, you can't continue producing".*
  - Environmental:

*"Sustainability of our vegetable farm depends on a large extent on the different activities we carry out in it and their impact on the environment"*



# Farmers perspective on challenges to achieve sustainability

- Overuse of chemical fertilizers

*"The combination of organic and chemical fertilizers must be done for higher yields, especially in our area where the soil is not very fertile. But we must always give priority to organic fertilizers for everyone's well-being".*

- Difficulties in obtaining suitable inputs, including equipment

*"The use of traditional tools (hoe, machete) for tilling the soil is becoming increasingly restrictive due to the arduous and time-consuming nature of manual work. the work is hard, sometimes you invest, and you lose everything. But it's comforting to know that there's a market for your products".*

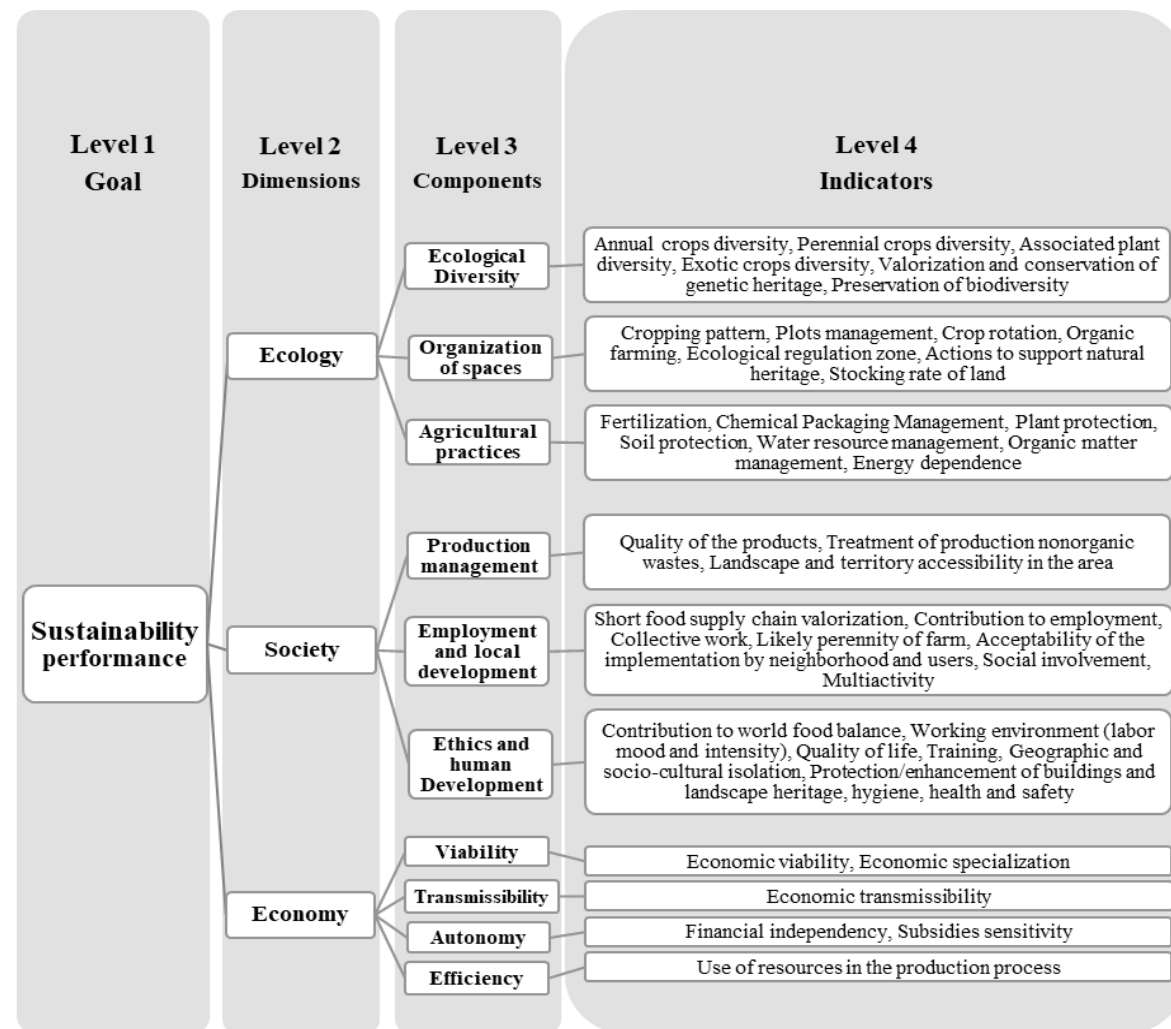
- Market access

*"When customers come, it's to buy big, shiny vegetables. But to achieve this, we have to use synthetic chemical fertilizers that destroy the soil. Customers don't value produce from purely organic systems"*



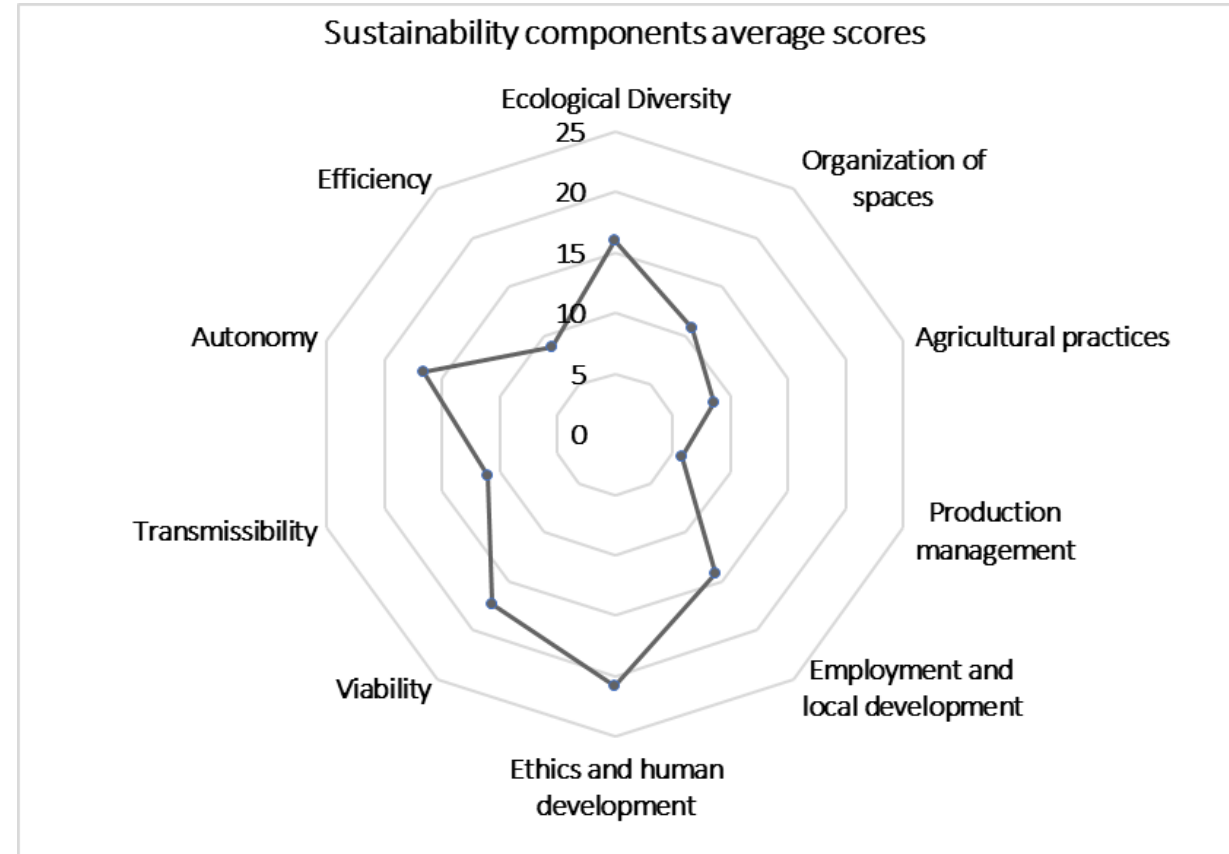
# Quantitative assessment of sustainability: using a matrix approach

- Considering three levels:
  - Ecological/Environmental component
  - Social component
  - Economical component
- IDEA "Indicateur de Durabilité des Exploitations Agricoles" framework: 43 indicators in total with assigned weight
- Survey in Benin in ATDEA 1 and 7: 200 farmers



# Sustainability of vegetable farms

- Components with the highest scores:
  - Ecological diversity
  - Ethics and human development
- Components with the lowest scores:
  - Organization of spaces
  - Agricultural practices
  - Production management,
  - Employment
  - Local development

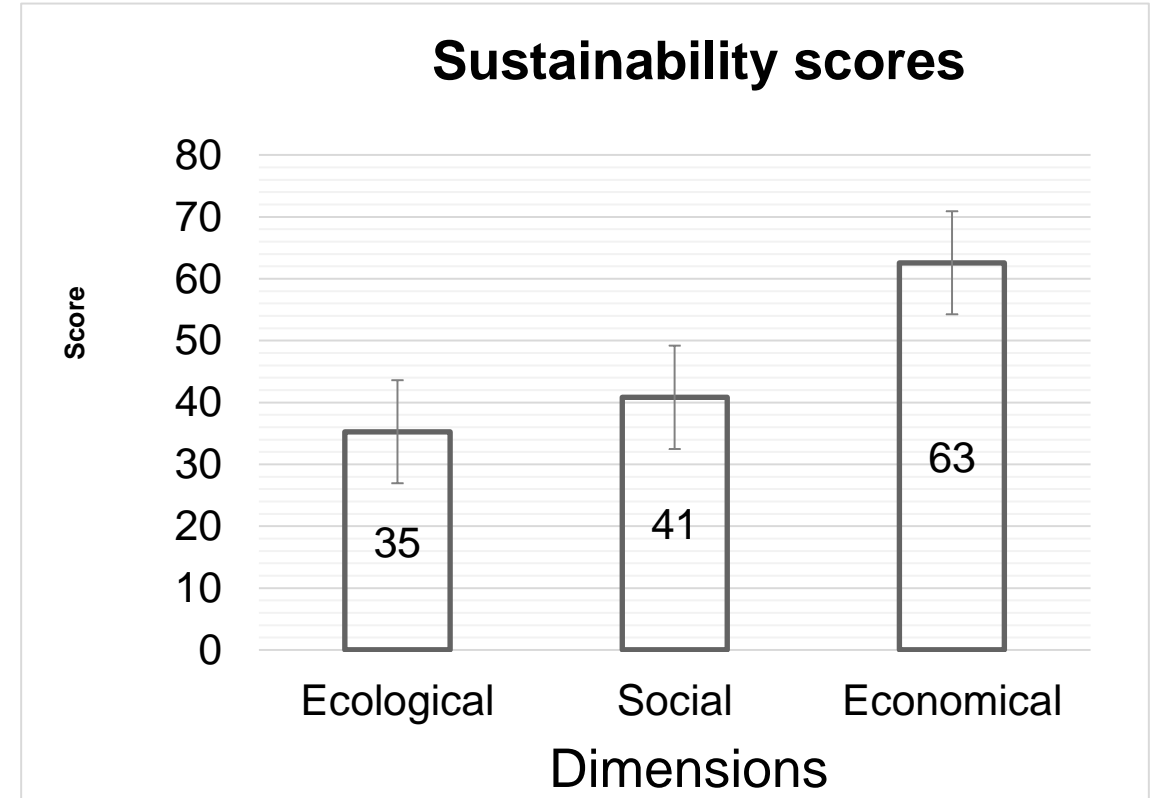


Farms sustainability components average scores



# Sustainability of vegetable farms

- No positive sustainability level were achieved in all three dimensions
  - 55% of the respondents had a critical level of sustainability
  - 45% had a problematical level of sustainability.
- Economic sustainability was more reachable
- Low value of sustainability associated with:
  - Poor quality and land management
  - Low efficiency of the production process



Average scores of farms sustainability dimensions

# Way forward

- Average sustainability of vegetables farms surveyed in Benin is overall critical
- Promoting on-farm biodiversity
- Raising awareness of farmers on the importance of mixed models and eco-responsible practices that could improve the environmental impact of vegetable production
- Promoting good agronomic and postharvest practices





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**Thank you  
for your  
interest!**

