

A COLLECTIVE MARKETING STRATEGY TO ASSESS THE SUSTAINABILITY OF GEOGRAPHICAL INDICATIONS.

THE CASE OF PARMIGIANO
REGGIANO PDO

Montpellier, France – 5/8 July 2022

1. ENVIRONMENTAL, SOCIAL AND ECONOMIC SUSTAINABILITY

Modern food systems features:

- Global supply chains
- Food production specialization, industrialized agriculture
- Monoculture and intensive animal farming system

Several negative impacts:

- Environmental integrity
- Food security VS food waste / malnutrition and obesity
- Producers-consumers relationship removal
- Organoleptic quality loss
- Animal and vegetal biodiversity loss

Food systems sustainability: an increasing relevant issue

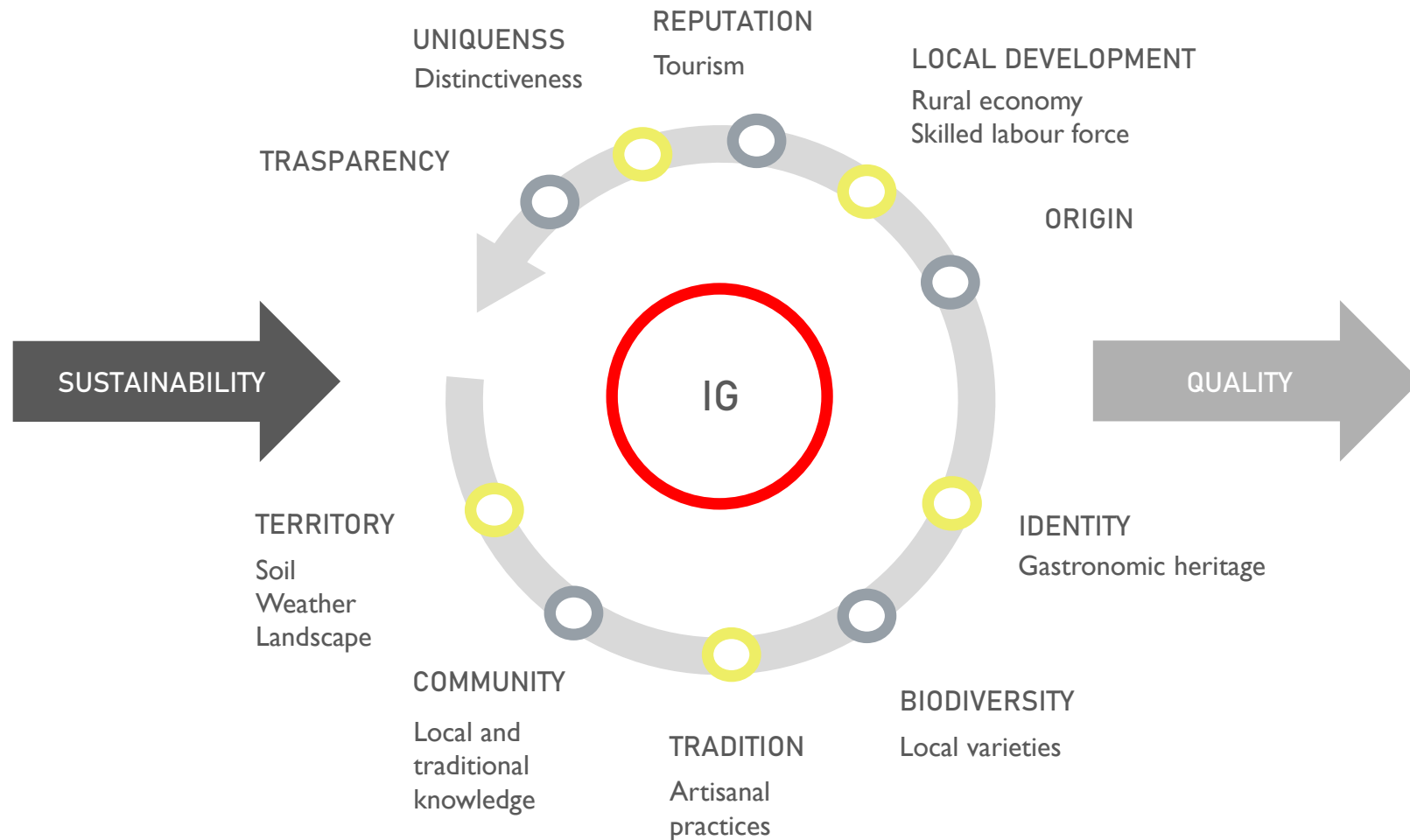


2. GEOGRAPHICAL INDICATIONS

- Alternative food systems, fair trade value chains, small scale producers and traditional products are emerging as valid substitute opportunities.
- Consumers have high expectation level towards Gis > confirmed by more than 10.000 GIs registered worldwide
- **In Italy the consumption of Gis has meaningfully increased during the last ten years**, showing consistent export values, and contributing up to the 20% of the national agri-food sector economy (ISMEA, 2020).



THE RELATIONSHIP BETWEEN GIS AND SUSTAINABILITY



GIs AND SUSTAINABILITY: MAJOR ISSUES

THERE IS A LACK IN MONITORING, ACKNOWLEDGE AND FRAME ALL THE DIMENSIONS OF THE SUSTAINABILITY BY THE STAKEHOLDERS OF GI's.

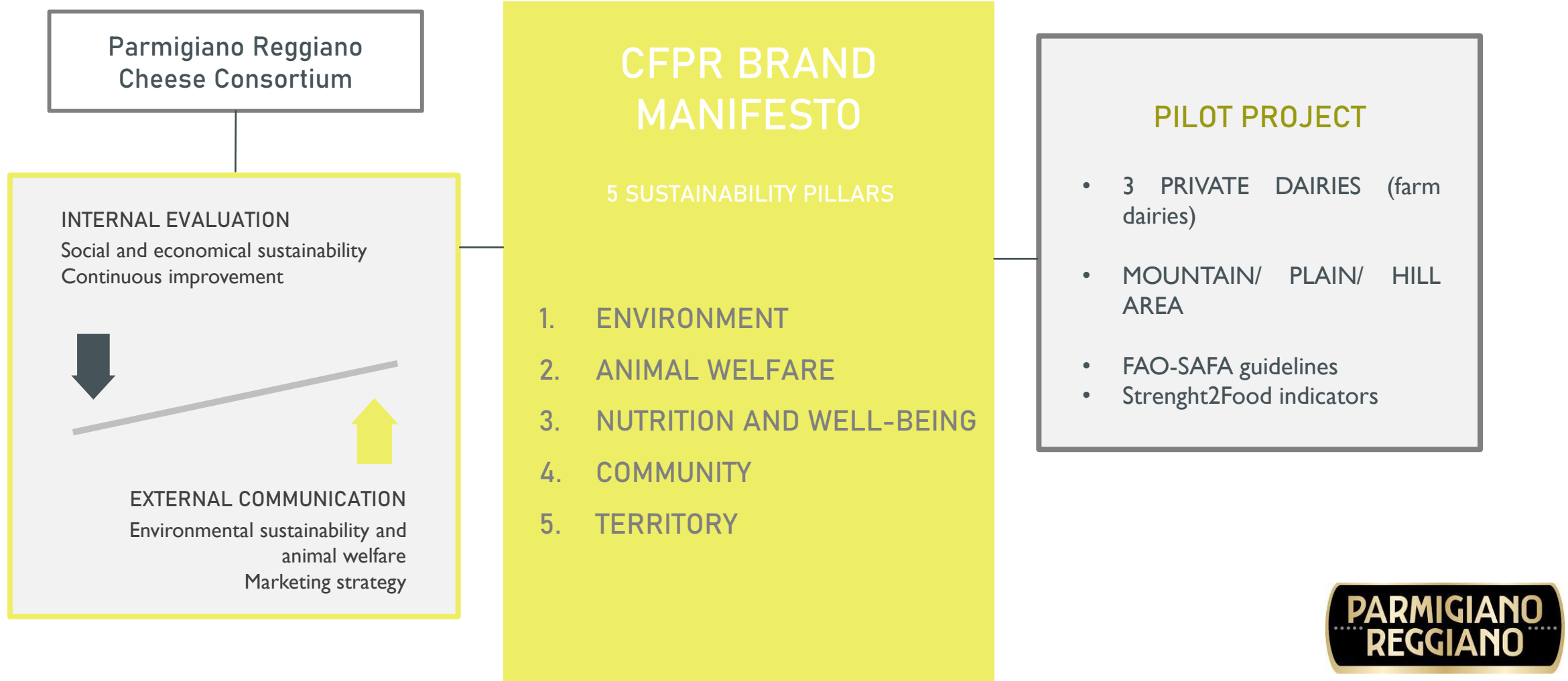
Therefore, there is a lack of capacity in properly COMMUNICATE the actual sustainability of the GIs to the consumers.

HOW TO ESTABLISH A SINGLE SUSTAINABILITY ASSESSMENT APPROACH.



- ☐ Case-by-case evaluation
- ☐ Contextualization

PARMIGIANO REGGIANO PDO SUSTAINABILITY ASSESSMENT



VARIABLES

FARM

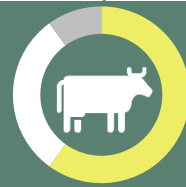
- UAA/AA
- Forage area/ UAA
- Fodder varieties
- % Internal fodder
- Animal density
- Water conservation
- Irrigation techniques

- Cow housing
- N. boxes/cow
- Mq/cow
- Interpartum period
- Animal feed
- Milking system

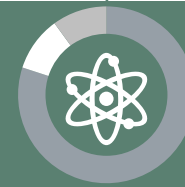
- N. tourists
- PGS certification



ENVIRONMENT



ANIMAL
WELFARE



NUTRITION AND
WELL-BEING

DAIRY

- % Re-used serum
- % food loss
- Separate collection
- Fuel
- Solar panels

- Animal welfare communication activities

- 1° and 2° category cheese wheels
- % salt
- % fat

VARIABLES

FARM

- Starting activity
- Working family members
- Average age
- External employees
- Employment rate
- % Male employees
- % Foreign employees
- Qualification degree
- Production efficiency
- Value implementation

- SOIL**
- Alfalfa/SAF
 - Stable meadow/SAF
 - Internal crops
 - Organic/conventional/integrated production system
 - Organic matter value
 - Fertilizers

- SOIL**
- Soil fertility increase
 - Soil management
 - Manure management
 - Biodiversity preservation
 - Pests and disease management

- ECONOMY**
- Rent/property SAU
 - Milk price
 - % animal GSP / Tot GSP



COMMUNITY



TERRITORY

DAIRY

- N. fairs and events/ local markets 2018
- Local community projects involvement
- CFPR participation value

- ECONOMY**
- Starting activity
 - Turnover
 - N. items
 - Cheese price
 - % cheese quotas

- ECONOMY**
- Sales values and channels
 - N. buyer

- ECONOMY**
- Buyer relationship value
 - Gross margin
 - Revenues > costs (5 years)
 - Annual meetings

METHODOLOGY

1. DATA COLLECTION

- Sources: producers interviews / CFPR
- Quantitative/ qualitative data
(→ conversion of qualitative data: Likert scale)

2. DATA NORMALIZATION

- Index from 0 (lower impact) a 1 (higher impact)
- **Dimensional indexes:** specific indicator performance
- **Synthetic indexes:** overall sustainability performance

3. DIMENSIONAL/SYNTHETIC RADAR CHARTS

Environmental data (farm)

	SAU/SA	SAF/SAU	N. foraggiere	% foraggi aziendali	Capi/Ha	Pratiche conservazione H2O No:1 / Si:2	Irrigazione Di superficie: 1 Aspersione: 2 Nessuno: 3
Collina	220/250	160/220	4	80	500/220		1
Montagna	200/300	180/200	1	60	360/200		1
Pianura	400/450	280/400	2	100	632/400		1

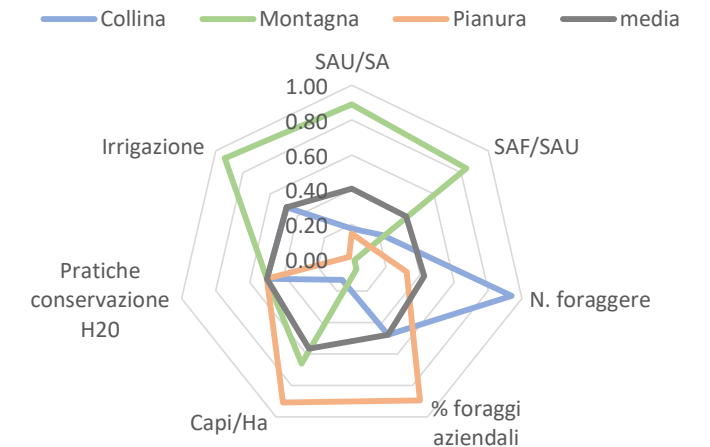
Dimensional indexes- Environment (farm)

	SAU/SA	SAF/SAU	N. foraggiere	% foraggi aziendali	Capi/Ha	Pratiche conservazione H2O	Irrigazione
Collina	0,1778	0,2224	0,9385	0,4792	0,1283	0,5000	0,4773
Montagna	0,8889	0,8393	0,0154	0,0625	0,6623	0,5000	0,9318
Pianura	0,1481	0,1250	0,3231	0,8958	0,9108	0,5000	0,0227
media	0,4049	0,3956	0,4257	0,4792	0,5671	0,5000	0,4773

Syntethic indexes- Environment (farm)

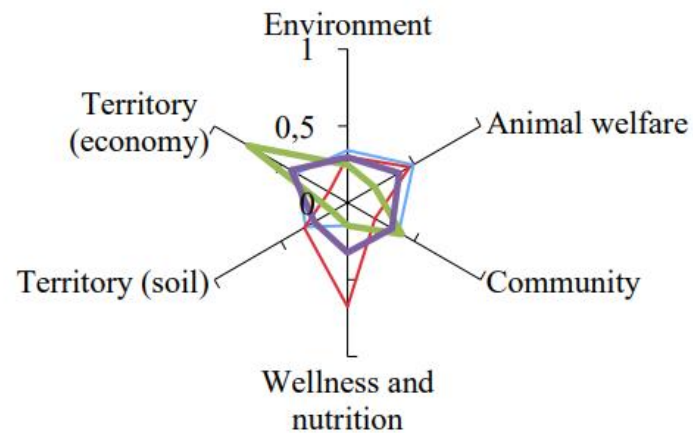
	AMBIENTE
Collina	0,3418
Montagna	0,3005
Pianura	0,2466
media	0,2963

Dimensional radar chart- Environment (farm)



RESULTS

Figure 1: Synthetic sustainable indexes - Farm level.

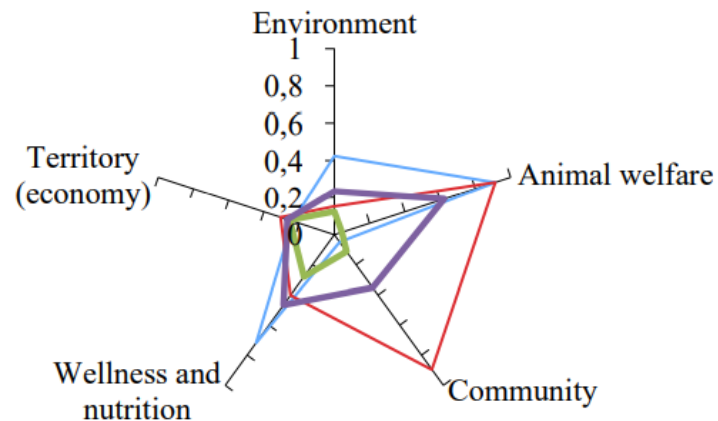


HILL DAIRY: environmental sustainability (n. fodder varieties/ forage self-sufficiency /crop diversification) and animal welfare (space width per cow)

PLAIN DAIRY: territory economy (rent/property UAA and total milk production) and community sustainability (employees production efficiency)

MOUNTAIN DAIRY: animal welfare (animal feed) and nutrition and well-being (PGS).

Figure 2: Synthetic sustainable indexes – Processing level.

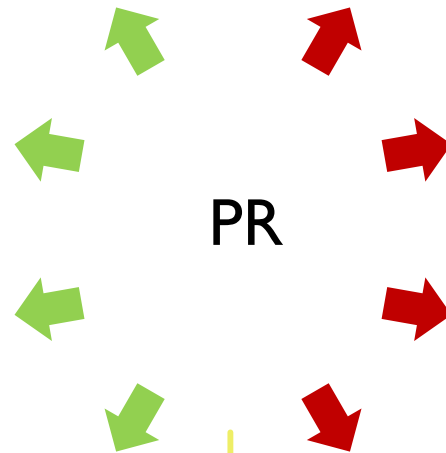


HILL DAIRY: environmental sustainability (methane), animal welfare (communication activities), nutrition and well-being (1 and 2 category cheese wheels).

MOUNTAIN DAIRY: community (n. of fairs and events), animal welfare (communication activities).

CONCLUSIONS

- Overall positive performance on animal welfare dimension (wide boxes, free range and high-quality feed products)
- Low intensity livestock pressure on the soil.
- Local territory impact (identity)
- Surrounding community involvement
- Internal and external social sustainability (family members involvement, low average age, inclination towards new technological changes, school and events participation level)
- High production efficiency
- Alfalfa cultivation potentiality



- Energy sources
- Employed fuel
- Water consumption
- % male employees
- Employment rate
- Commercial strategies and market stability

Overall sustainability level of the three samples:
medium-high

- ✓ Approach: appropriate >>

It highlights the most efficient elements of the system and, at the same time, the most critical issues.

- ✓ Need for model integration with cooperative and artisanal dairies
- ✓ Time extension and data update of the evaluation (3/5 years).

THANK YOU!

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