

Local strategies to bring added value to mountain products



Photos : A Vincent

Audrey VINCENT

Associate Professor, ISARA, Laboratory of rural studies



A few words about ISARA

- ISARA : an higher education school specialised in agriculture, food systems and environment
 - A 5 year study program (equivalent to a combined bachelor and master)
 - Master programs
 - Summer schools
- Research activities
- Consultancy work



Photo: ISARA

Social Sciences at ISARA

Scientific disciplines: sociology, economy, geography.

8 researchers, 2 PhDs

**Agriculture, local / community
development and environment**



Food systems



Main topics of research

- Organic farming: motivations of farmers, consumers preferences, local development, place based dynamics
- Mid-tier supply chains (Value based supply chains)
- Label of origin: geographical indications
- Community development and ecological transition
- Environment and Biodiversity preservation: motivations and practices of farmers, dynamics of local projects
- Agriculture and water pollution: implementation of water policy, local initiatives
- Food : consumers preferences, poverty and access to quality food



Outline of the presentation

- European quality schemes
- Comparison of two PDO cases having two different strategies
 - The case of Comté PDO
 - The case of Bleu du Vercors Sassenage PDO
- Discussion of the strenghts and weaknesses of the two cases and strategies
- Futures challenges
- Conclusion

European quality schemes (PDO, PGI etc)

- Aims of EU quality schemes

- Promote the products' « unique characteristics » link to a place, a specific quality, a know-how, a tradition...
- Help consumers to distinguish quality products
- Help farmers to better market these products
- Protect the names of specific products (geographical indications recognised as intellectual property)

European quality schemes

- Geographical indications

- Protected Designation of Origin (PDO)
food, agricultural products and wine
- Protected Geographical Indication (PGI)
food and wine
- Geographical indication (GI)
spirit drinks
- Traditional Speciality Guaranteed (TSG)
- Optional quality term « Mountain Product »
- Organic farming



Geographical indications

➤ Protected Designation of Origin (PDO)

Every part of the production, processing and preparation process must take place in the specific region.

For wines, this means that the grapes have to come exclusively from the geographical area where the wine is made.

→ Strongest link to the place



Source : <https://agriculture.ec.europa.eu>

Geographical indications

➤ Protected Geographical Indication (PGI)

For most products, at least one of the stages of production, processing or preparation takes place in the region.

In the case of wine, at least 85% of the grapes used have to come exclusively from the geographical area where the wine is actually made.

➤ Geographical indication (GI) of spirit drinks

At least one of the stages of distillation or preparation takes place in the region. However, raw products do not need to come from the region



Traditional speciality guaranteed

- It highlights the traditional aspects, such as the way the product is made or its composition, without being linked to a specific geographical area.
- The name of a product being registered as a TSG protects it against falsification and misuse.



Source : <https://agriculture.ec.europa.eu>

« Mountain product » optional quality term

- Helps farmers to market products made in “difficult natural conditions »
- Highlights the specificities of products made in mountain areas
- EU regulation 1151/2012, art. 31 :
 - **Both the raw material and feedstuffs for farm animals** come essentially from mountain areas
 - In the case of products of animal origin:
 - 2/3 life in mountain areas
 - at least ¼ life in transhumance grazing on pastures in mountain areas
 - Feedstuffs: % of annual animal diet (expressed as a % of dry matter) produced in mountain areas
 - In the case of processed products, the **processing also takes place in mountain areas**

« Mountain product » optional quality term

- At Member States level, possibility to define:
 - Derogations for processing outside mountain areas (area of 30 km)
 - Conditions for controls
 - Use of logo

Organic farming

- **A specific production method and an official european quality scheme**

« Organic production is an overall system of farm management and food production that combines best environmental practices, a high level of biodiversity, the preservation of natural resources, the application of high animal welfare standards and a production method in line with the preference of certain consumers for products produced using natural substances and processes”

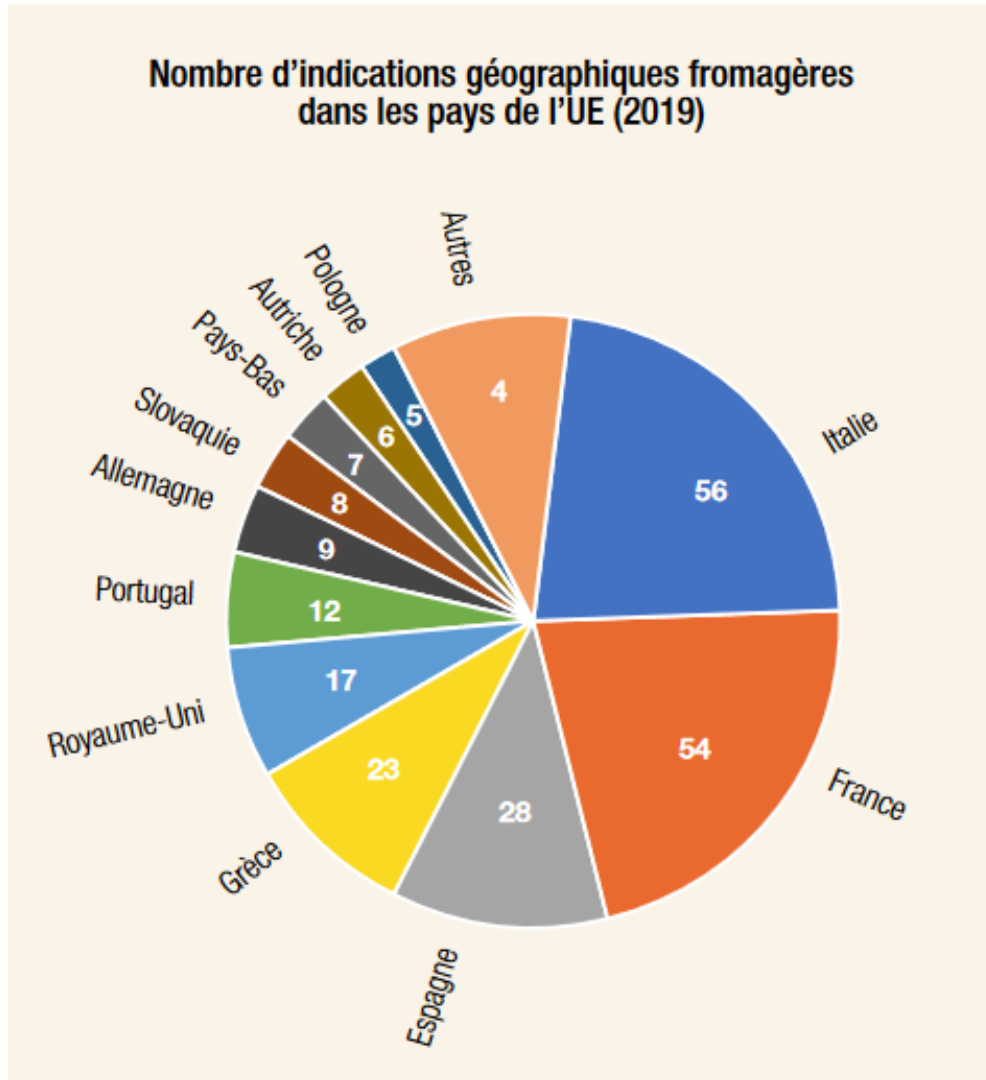
- (European regulation N° 834/2007, 28th June 2007)

→ European wide production rules



Source : <https://agriculture.ec.europa.eu>

The use of geographical indications for cheese in Europe



Source : CNAOL, 2020

➤ Italy, France, Spain and Greece :

countries with highest number of PDO for cheese (161 out of the 248 geographical indications of the EU)

Use of PDO for milking products in France



PDO :
50 PDO for milk products including 45 cheeses 3 butters 2 creamers

➤ 60 milk products have a geographical indication (PDO + PGI) in France

➤ PDO as been widely used for cheeses

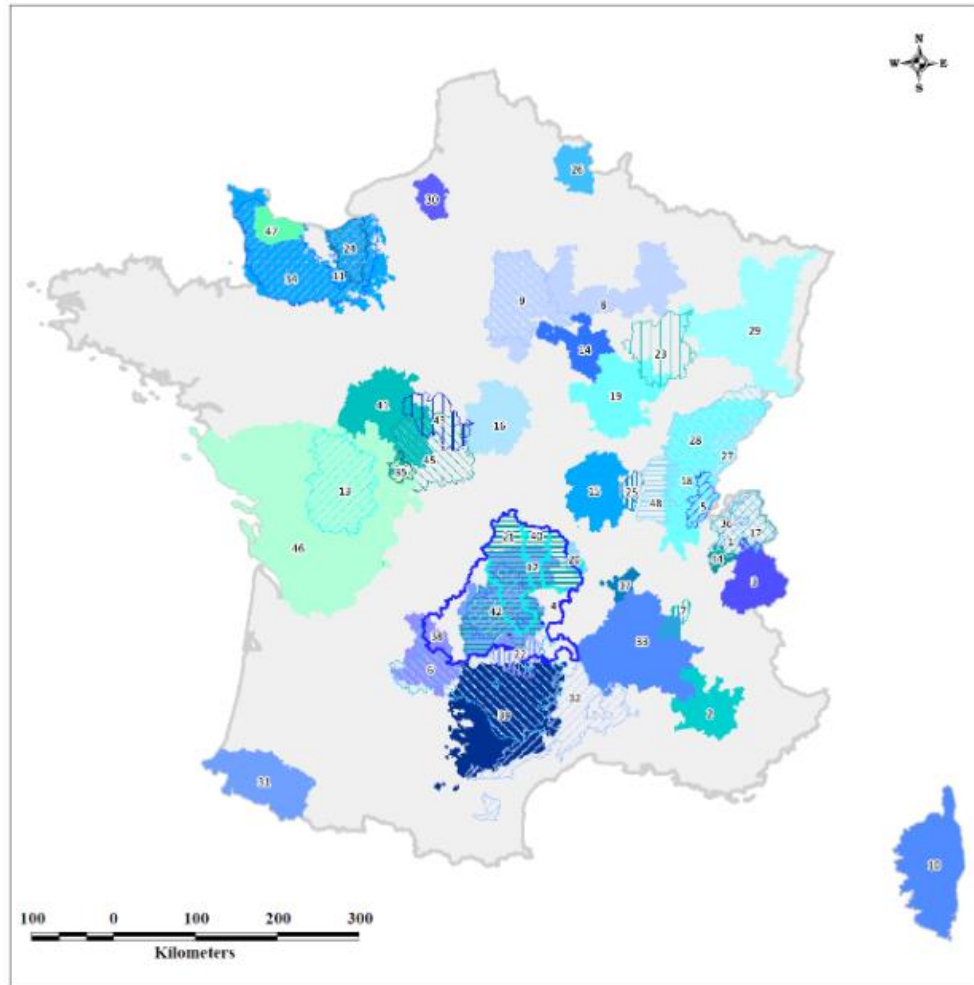
➤ PDO cheeses represent:

- 15,8% of mature cheeses
- 7% of all cheeses (IT: 22% of all cheeses)
- 70% of row milk cheese (not including cheeses processed on-farm)
- 27,4% of the milk processors' turn over

PGI :
10 PGI for milk products including 9 cheeses 1 cream

PDO as a development tool in french mountains

AOP PRODUITS LAITIERS



Sources : INAO, BD-Carto IGN – Octobre 2016

Cette carte localise les 52 dénominations reconnues en AOP. Lorsqu'une zone représente plusieurs aires géographiques, les AOP concernées sont référencées par le même numéro

Légende :

Fromages :

- | | |
|----|---|
| 1 | Abondance |
| 2 | Banon |
| 3 | Beaufort |
| 4 | Bleu d'Auvergne |
| 5 | Bleu de Gex du Haut Jura
Ou Bleu de Septmoncel |
| 6 | Bleu des Causses |
| 7 | Bleu du Vercors-Sassenage |
| 8 | Brie de Meaux |
| 9 | Brie de Melun |
| 10 | Brocciu corse ou Brocciu |
| 11 | Camembert de Normandie |
| 12 | Cantal ou Fourme de Cantal |
| 13 | Chabichou du Poitou |
| 14 | Chaource |
| 15 | Charolais |
| 16 | Crottin de Chavignol ou
Chavignol |
| 17 | Chevroitin |
| 18 | Comté |

- | | |
|----|--|
| 19 | Epoisses |
| 20 | Fourme de Monbrison |
| 21 | Fourme d'Ambert |
| 22 | Laguiole |
| 23 | Langres |
| 24 | Livarot |
| 25 | Mâconnais |
| 26 | Maroilles |
| 27 | Mont d'Or ou Vacherin
du Haut-Doubs |
| 28 | Morbier |
| 29 | Munster |
| 30 | Neufchâtel |
| 31 | Ossau-Iraty |
| 32 | Pélarдон |
| 33 | Picodon |
| 34 | Pont-l'Evêque |
| 35 | Poulligny-Saint-Pierre |
| 36 | Reblochon ou
Reblochon de Savoie |
| 37 | Rigotte de Condrieu |
| 38 | Rocamadour |

- | | |
|----|-----------------------------|
| 39 | Roquefort |
| 40 | Saint-Nectaire |
| 41 | Sainte-Maure de
Touraine |
| 42 | Salers |
| 43 | Selles-sur-Cher |
| 44 | Tome des Bauges |
| 45 | Valençay |

Autres produits laitiers :

- | | |
|----|---|
| 46 | Beurre Charentes-Poitou
/ Beurre des Charentes /
Beurre des Deux-Sèvres |
| 47 | Beurre d'Isigny / Crème
d'Isigny |
| 48 | Beurre de Bresse /
Crème de Bresse |

INAO-Service Délimitation



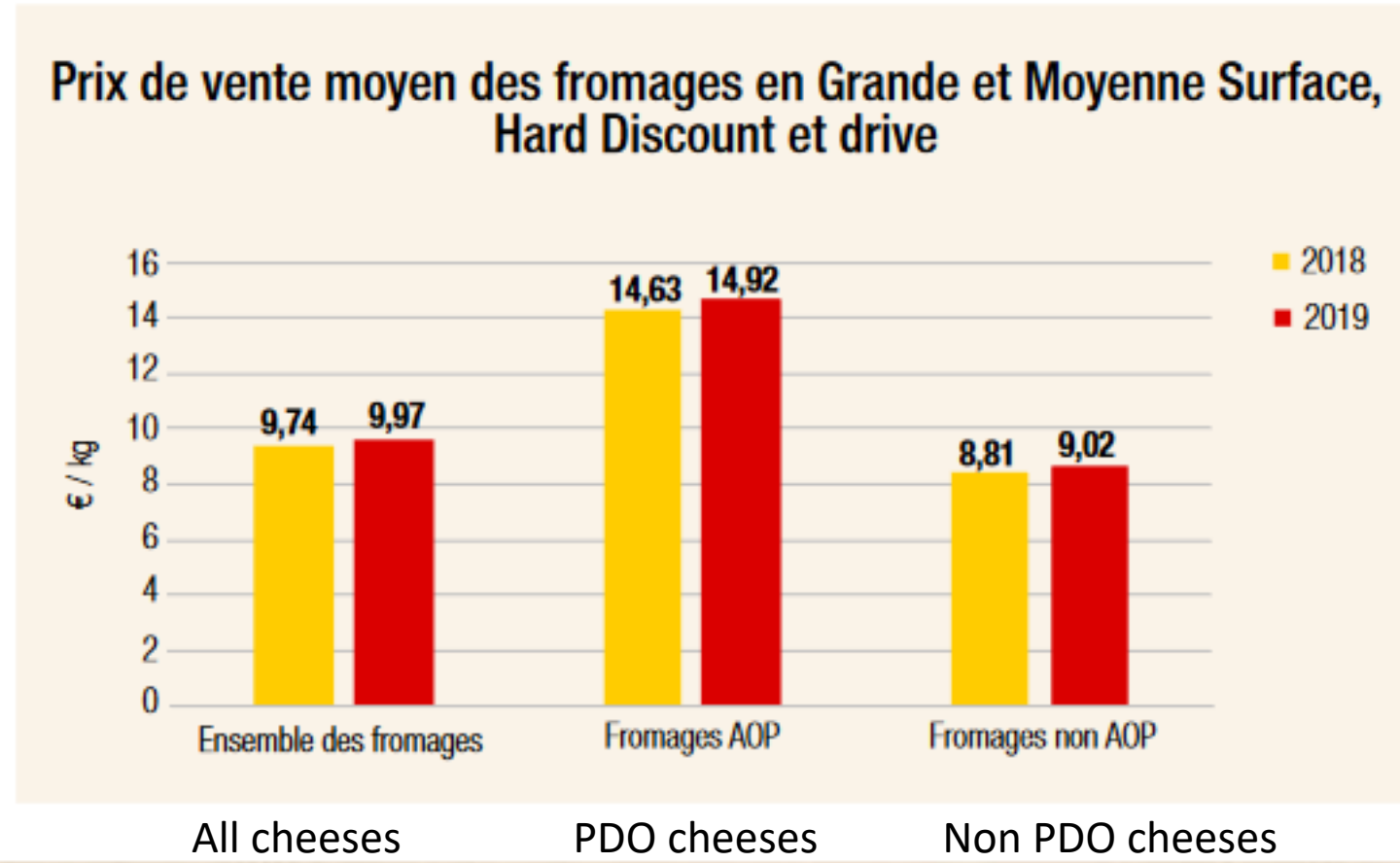
Source : CNAOL, 2020

Cette carte localise les 52 dénominations reconnues en AOP. Lorsqu'une zone représente plusieurs aires géographiques, les AOP concernées sont référencées par le même numéro

Localisation of PDO milking products in France

An average higher price for PDO cheeses in France

Prix de vente moyen des fromages²



Average prices of cheeses sold in supermarkets in France

Source : CNAOL, 2020

The case of Comté PDO :
a well know cheese, widely exported outside of his
production area



The case of Comté PDO

- PDO created in 1958
- 2390 farmers in 2020
- 65 000 tons of cheese in 2020
- A large production area located:
 - in Jura mountains range
 - over 2 regions (Franche-Comté mainly + Rhône-Alpes)
 - over 4 departments (Doubs, Jura, Ain, Saône et Loire)
- A raw cow milk cheese
- A hard pressed cheese (fromage à pâte pressée cuite)



Comté cheese

- A long history (back to the middle age)
- A cheese that:
 - can be kept for long
 - is obtained by mixing milk from different farms (no on-farm processing but a historical tradition of cooperation/collective action for processing)
 - is made in « Fruitière » which are farmers' cooperative (about 140) or by private milk processors
 - is matured by « cheese maturer »/ « affineur » (12)
- A whole cheese weight = 40 kg (about 450L of milk)



Source : <https://agriculture.ec.europa.eu/>



Cheese maturing cellar

Source : <https://agriculture.ec.europa.eu/>

Comté cheese production rules

- Two cows breed allowed (Simmental and Montbéliarde)
- Maximum 4600 L milk/ha
- Mandatory grazing
- No fermented feed (silage...)
- Maximum 1800kg of feed concentrate per year and per cow
- GMOs forbidden (including in feed)
- Milking robot forbidden
- Maximum fertilisation per hectare (120 U N/ha)

Comté



Source : <https://www.produits-laitiers-aop.fr>



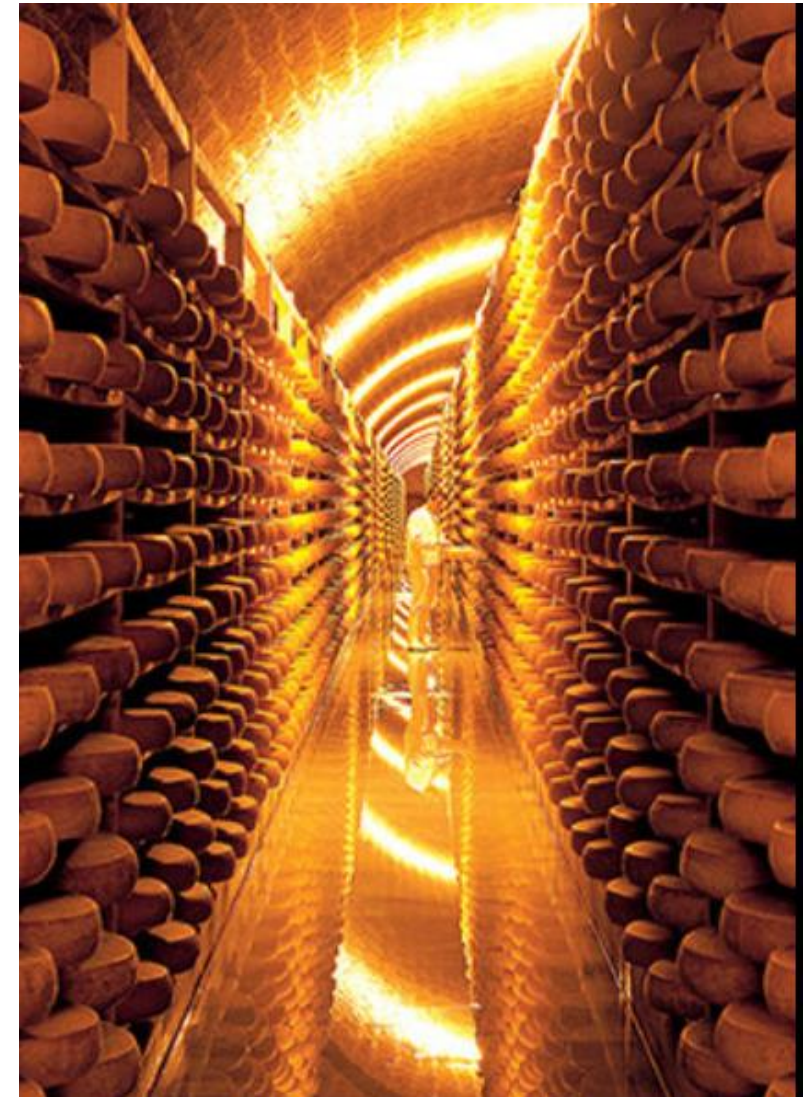
Source : <https://www.comte.com/s-aop.fr>

Comté cheese production rules

- Collecting area : max 25km from the processing place
- Tank in copper and with a maximum size of 4000L
- Whole cheese turned and rubbed everyday for the first 10 days, then at least twice a week
- Minimum 4 months for cheese maturing



Source : <https://agriculture.ec.europa.eu>



Fort des Rousses, Juraflore

Source : <https://www.juraflore.com/fr>

Comté selling strategy

- Direct selling locally in the whole production areas
- Supermarkets and specialised cheese shop everywhere in France (In France, supermarkets are the main selling point for Comté)
- Export abroad (Germany, Belgium, UK, USA, Japan etc)



Fruitière des Moussières

Source : <https://www.comte.com>

Comté PDO : a tool for local development

- 2 190 000 over night stays
- 120 000 visits of “fruitières”
- 30 000 visits of maturing caves
- La maison du Comté : A museum dedicated to the Comté history in Poligny
- Les routes du Comté : a set of circuits to discover part of the Comté history or production



Avec les "Savoureux Circuits", découvrez notre sélection "Coup de Coeur" avec 26 idées de séjours et partez sur les Routes du Comté à la rencontre des hommes et des femmes du Comté !



01 24h sur 2 jours

Premières belles rencontres sur les routes du Comté



02 1 journée

Poligny, Capitale du Comté

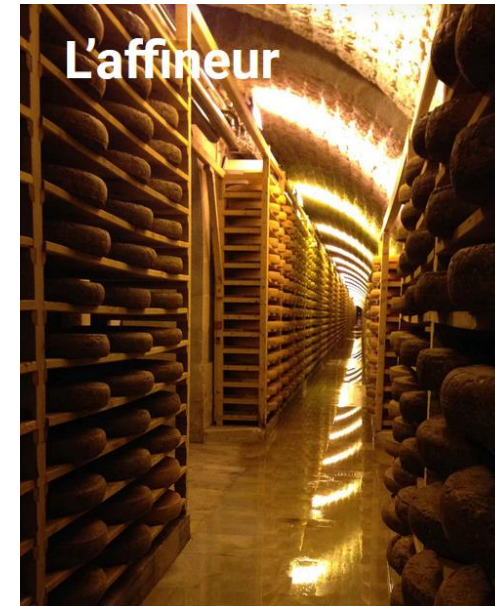


03 2 jours

Le Bugey, paysages et saveurs de table

The governance

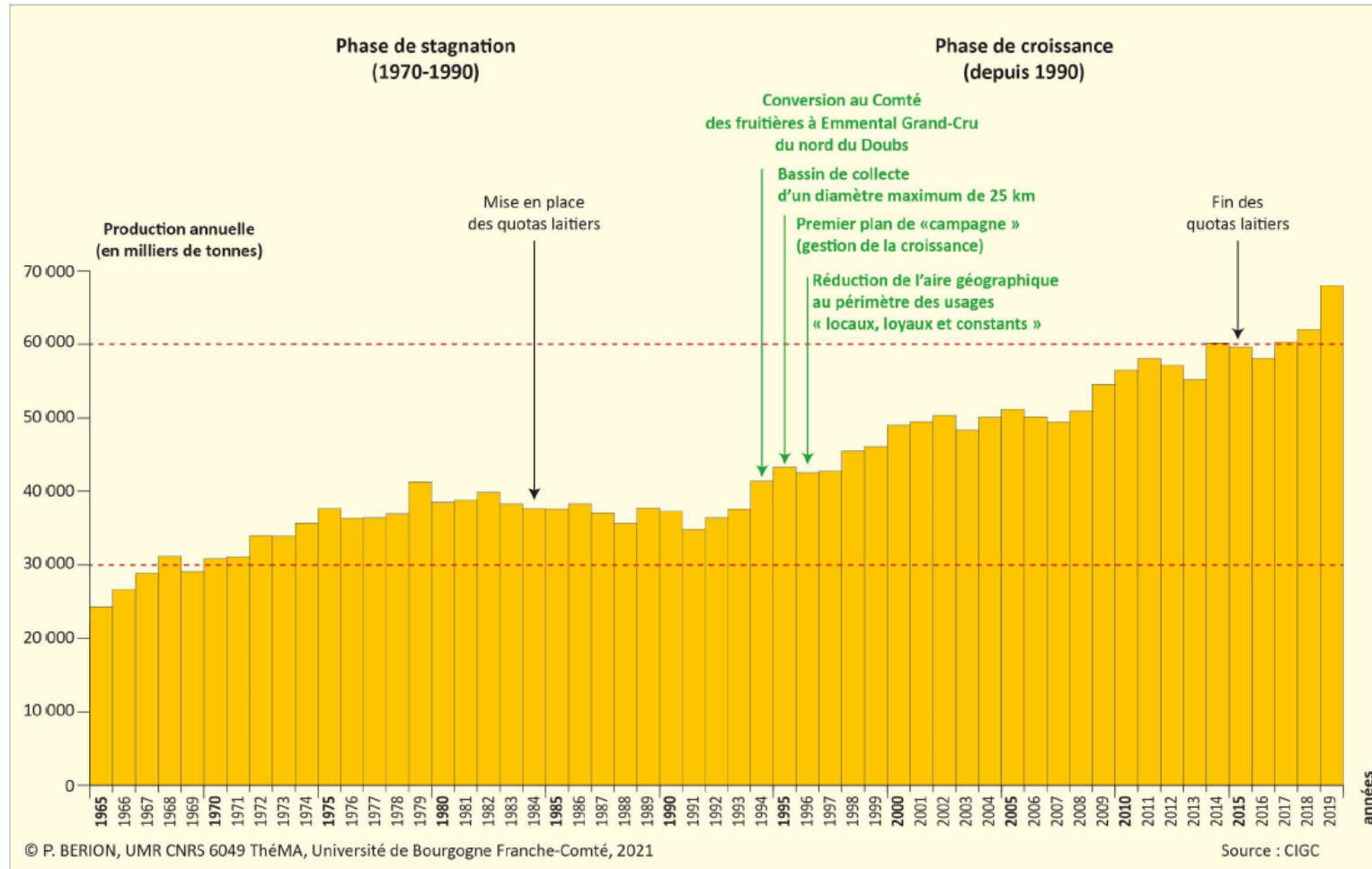
- Comité interprofessionnel du Comté (CIGC) = Committee for the management and the defense of the Comté PDO
- Designing the strategy and taking collective decision (with the different stakeholders involved in the supply chain)



Comté cheese : an economic success story

- 1st PDO cheese in volume in France, 65 000 tons in 2020

L'évolution de la production du Comté : 1965 – 2019, de la stagnation au développement raisonné

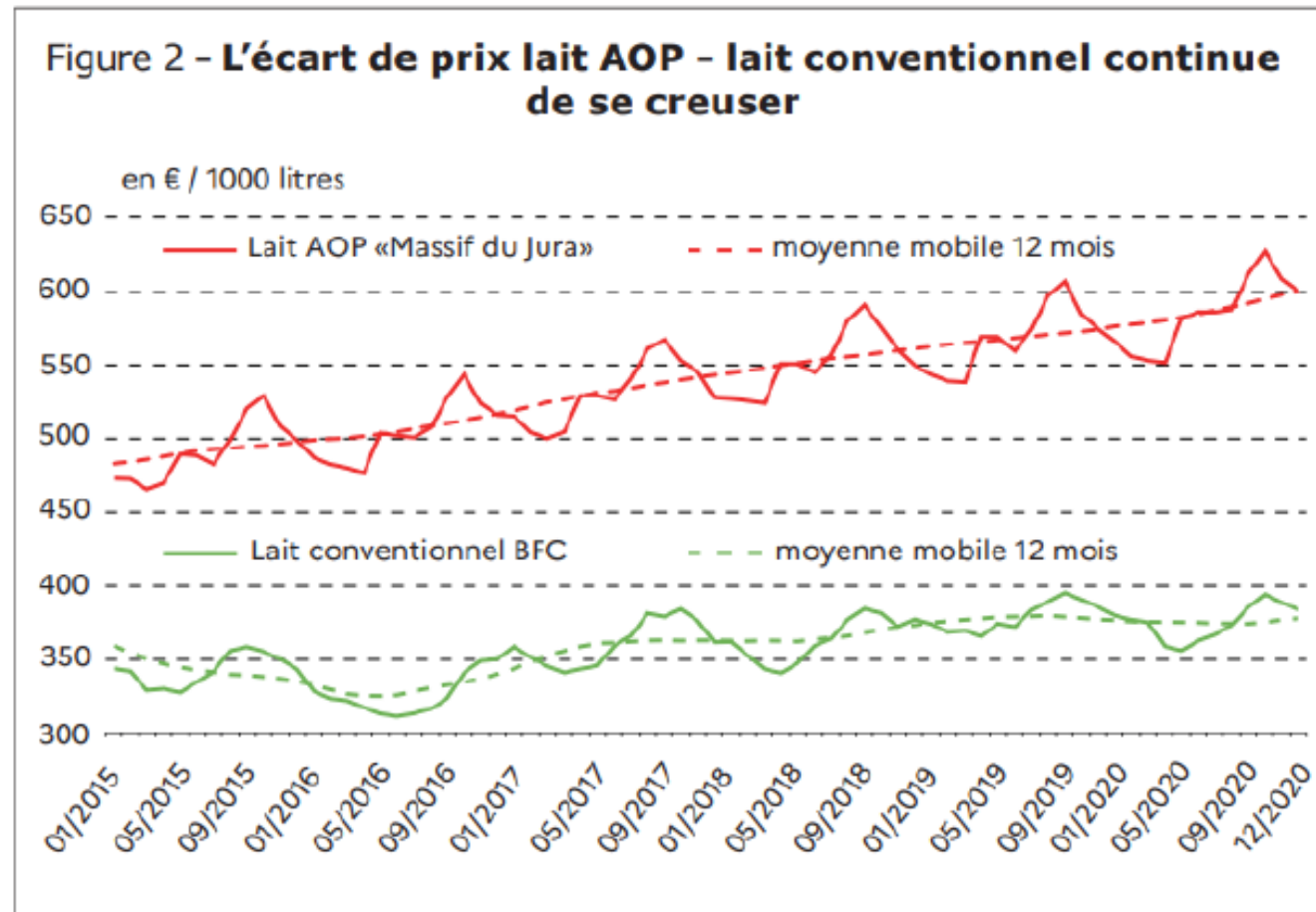


Evolution of yearly production of Comté

Source : Berion, 2021

Comté cheese : an economic success story

- An milk price (paid to farmers) much higher than the non-PDO one



Source: Agreste - Enquêtes annuelles laitières

Average price for the PDO milk (in red compared to non PDO milk in Green)

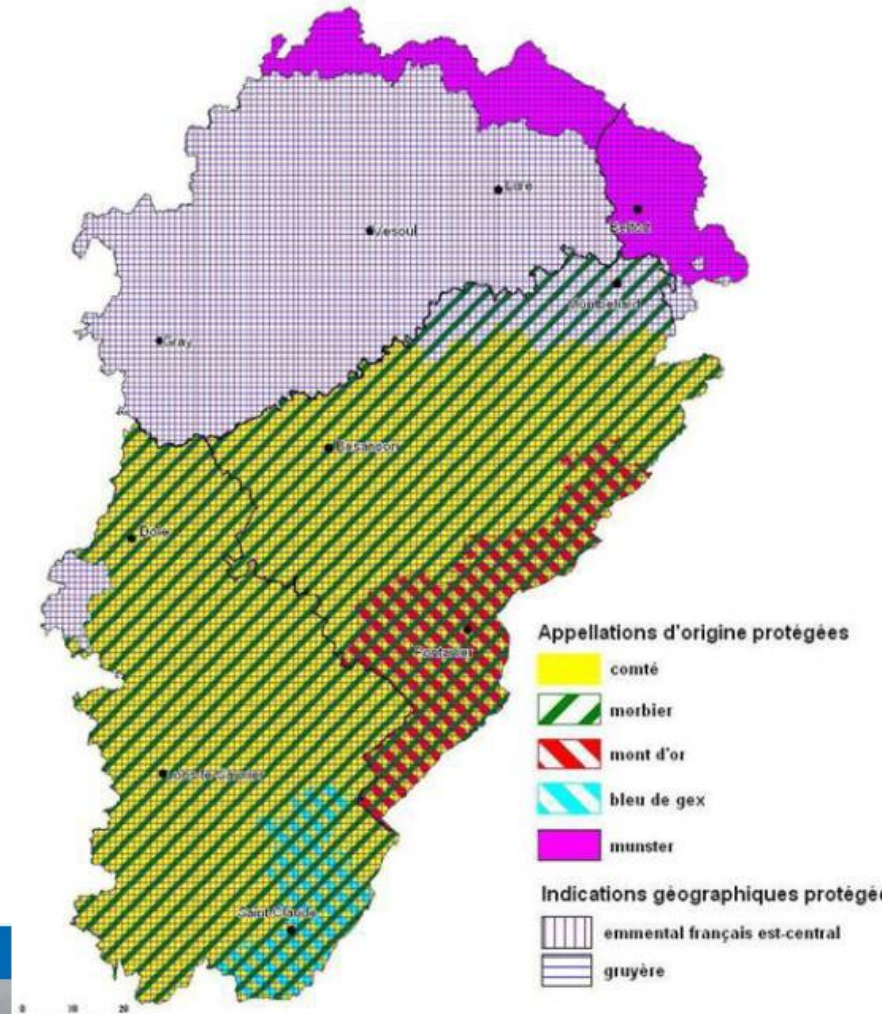
Source : Berion, 2021

A specialisation trend

Cheese	Volume sold in 2009 (in tons)	Volume sold in 2019 (in tons)
Bleu de Gex	558	477
Mont d'Or	4340	5707
Morbier	7 638	10768
Comté	46 738	62 220

Volume sold for the 4 PDO cheeses of Franche Comté

Source : INAO, CNAOL 2020



Geographical areas of the 4 PDO cheeses in Franche Comté

Source : Rapport Acteon, Institut de l'élevage, 2017. La production de lait AOP franc-comtoise, potentialités et dynamiques à l'horizon 2030

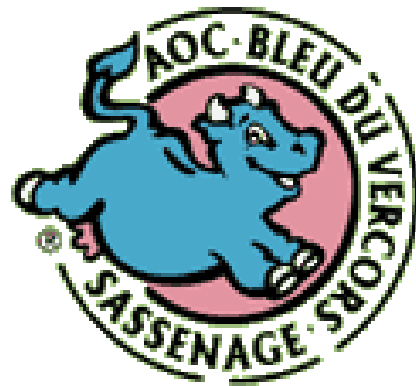


Source : <https://www.monbleu.fr/>

An intensification pattern

- Decrease of the number of farms
- Increase of the number of cows per farm
- Increase of the size of the parcels
- Some permanent pastures turned into temporary pastures
- Intensification of forage production

The case of Bleu du Vercors Sassenage PDO : a small production and the development of local sales

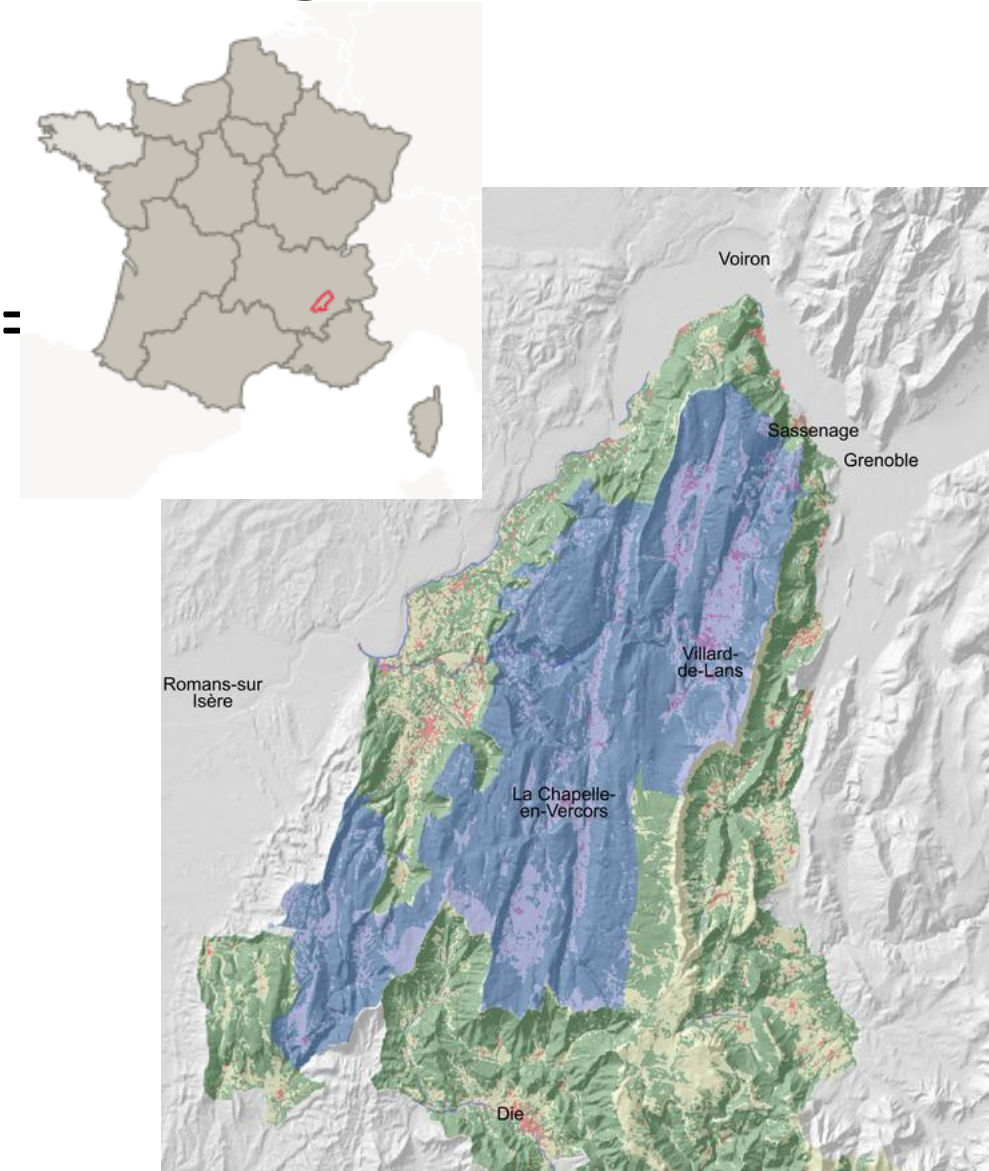


**BLEU DU VERCORS-
SASSENAGE**



The case of Bleu du Vercors Sassenage PDO

- PDO created in 1998
- 32 farms in 2020 (11 in organic)
- 440 tons in 2020 (40 tons of Bleu fermier = made on-farm)
- A small production area located:
 - in Vercors mountain range, within the natural regional park of Vercors
 - 2 departments and 27 municipalities (13 in Drôme and 14 in Isère)
- A cow milk cheese made with pasteurised or « thermisé » or raw milk
- A blue veined cheese (fromage à pâte persillée), not pressed, not cooked

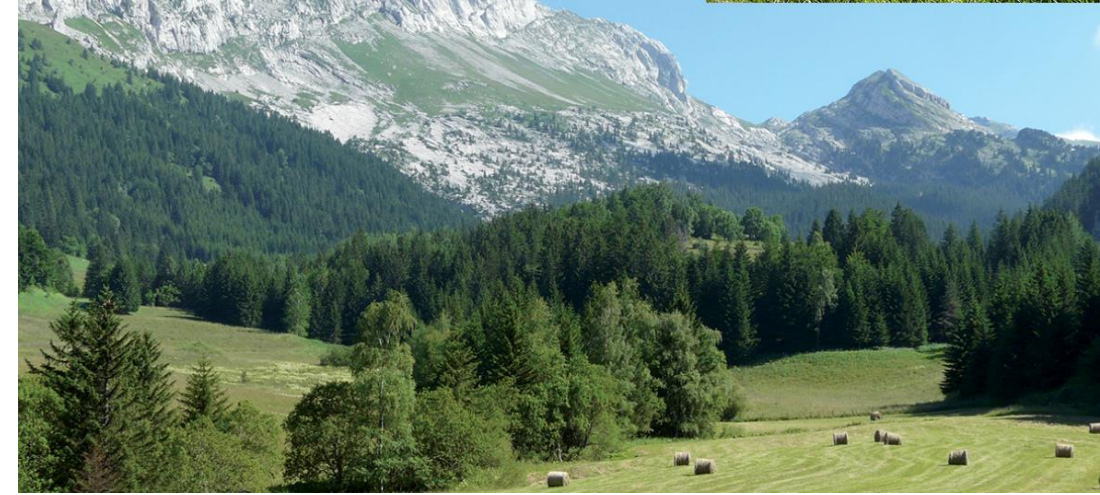


Bleu du Vercors Sassenage PDO area (in Blue)

Source : <https://www.produits-laitiers-aop.fr>

Bleu du Vercors Sassenage cheese

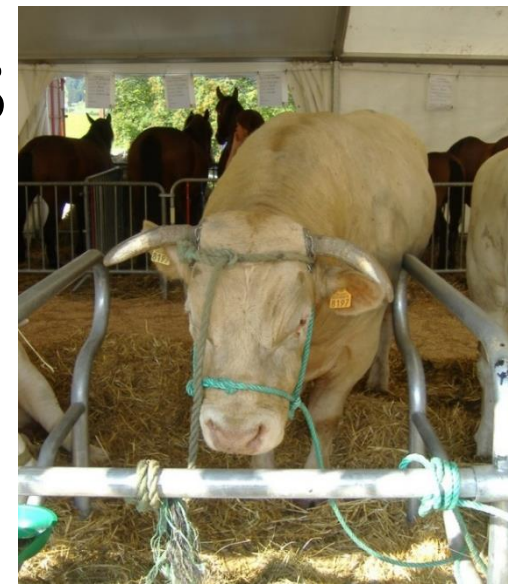
- A quite recent history :
 - Existed since the middle age but had almost disappeared in the early 20th century
 - 9 farmers re-launched it in the early 1990ies
- A cheese that:
 - cannot be kept for long
 - can be processed on-farm (9) or in a cooperative (1) or private (1) cheese processing unit, which also take care for the maturation
- A whole cheese weight = 4 to 4,5 kg



Cheese maturing cellar

Bleu du Vercors cheese production rules

- Three cows breed allowed (Montbéliarde, Abondance, + 3% of « Villarde » breed in the herd)
- Minimum 180 days of grazing
- Fermented feed: silage forbidden, « enrubannage » up to 60% max of the feed
- All the hay must come from the production area
- Maximum 1800kg of feed concentrate per year and per cow
- GMOs forbidden, including in feed



Source : A. Vincent



Source : <https://bleuduvercors-sassenage.com/>

Bleu du Vercors cheese production

- Collecting area :

Vercors Lait cooperative collects the milk up to 30 km around the coop

- Tank in inox
- Rennet added at 35°C
- Cheese rubbed with salt 3 times every 12h
- Then, 21 days for cheese maturing (cheese are jabbed with needles several times to enable a regular development of the « blue »)



Source : <https://shop.vercorslait.com/>



Source : A. Vincent



Source : <https://routedesfromagesavelo.fr>

The governance

- A very small PDO
 - One cooperative (main stakeholder, processing and selling more than 86% of the Bleu du Vercors)
 - One small private processor
 - One facilitator hosted at the natural regional park to promote and manage the PDO
- The cooperative is a central player
- Strong involvement of its president and board members



Source : A. Vincent



Source : <https://bleuvercors-sassenage.com>

The cooperative Vercors Lait

- “Vercors Lait”, established in 1956 and belonged to a private company until 2003
- Then, it was taken over by farmers who wanted to:
 - keep a local processing unit
 - be active in the strategy and decision making
 - create added value for their products without necessarily doing on-farm processing
- They were supported by the rural district



Source : <https://www.fromage-saint-marcellin.fr>

Bleu du Vercors marketing strategy

- **Direct selling** locally in the whole production areas
- In 2020 at the cooperative Vercors Lait :
 - 700 tons of cheese produced in total, amongst which 400 tons of Bleu du vercors cheese
 - Development of a **large panel of 10 other cheeses** : Vercorette (8 to 15 months of maturing), tome fleuries, tome à l'ail des ours, raclette (fumée, au piment...), IGP saint Marcellin, IGP Saint Félicien
 - Selling milk

- Le Bleu du Vercors
- Le Col Vert
- La Bournette
- Le Vercorais
- La Vercorette
- Le Petit Frais
- La Brique du Vercors
- Le Saint Marcellin
- Le Saint Félicien
- Faisselle

Panel of cheeses produced by « Vercors Lait » cooperative



Source : A. Vincent



Source : <https://shop.vercorslait.com/>

Bleu du Vercors marketing strategy



VOUS ÊTES ICI : ACCUEIL » NOS RECETTES

RECETTE DU MOMENT

RECETTES D'HIVER



TOUTES LES RECETTES D'HIVER

RECETTES DE PRINTEMPS



TOUTES LES RECETTES DE PRINTEMPS

RECETTES D'ÉTÉ



Source : <https://www.vercorslait.com>

Bleu du Vercors selling strategy

- 35% of Vercors Lait products are sold directly in the cooperative shops (3 shops)
- Sales in local shops
- 10-15% sold in supermarkets



Shop for direct sales in Clelles

Source : A. Vincent



Shop for direct sales in Villard de Lans

Source : A. Vincent



Shop for direct sales In Seyssins

Source : A. Vincent

Bleu du Vercors PDO : a tool for local development



Source : A Vincent
Vercors Landscape

Bleu du Vercors economic development

- An milk price (paid to farmers) in 2021:
 - 395€/1000L for conventional PDO milk (about 300€/1000L for non-PDO milk)
 - 480€/1000L for organic PDO milk
- A continuous development of the production

Production	2003	2012	2013	2014	2016	2021
Tons	158	214	249	287	300	440

Average quantity of Bleu du Vercors production

Source : P Faure, 2022

Two different strategies

- Comté case : A specialised strategy
 - A « old » well know PDO
 - An strong increase in production
 - A selling strategy strongly relying on export outside of the production area
- Bleu du Vercors Sassenage case : A mixed strategy
 - a « flagship product » AND a large panel of other cheeses (+milk)
 - A strategy based on the development of local consumption
 - Price premium given to farmer less attractive than in the case of Comté



Two different strategies

- Two strategies which are adapted to the local context and history
- PDO : an important asset but not a panacea
- PDO creation : a long process, a certain cost
- Need time to promote and get it known by consumers
- No one-size-fits-all « recipe » but a need to design the strategy based on the local circumstances



New challenges and questions for these PDO

- Adapting to climate change (decrease in forage production, equilibrium between herd size and forage production etc...)
- Maintaining consumer trust and the PDO good image
- Taking into account the vulnerability of the ecosystems

New challenges and questions

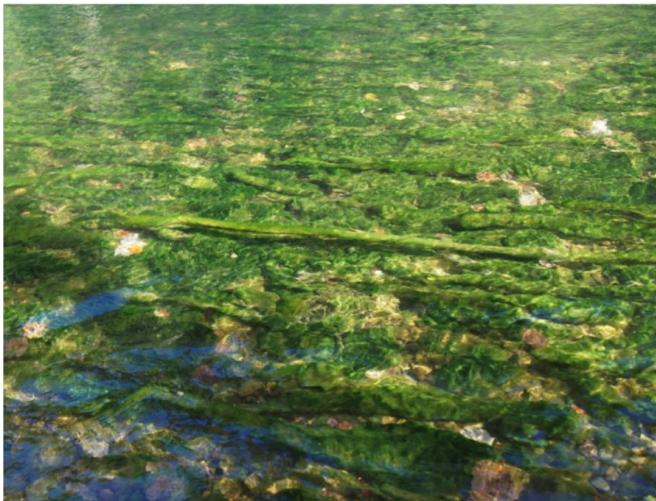
- Bleu du Vercors PDO production:
 - More intensive use of permanent pastures
 - Replacement of permanent pastures by temporary meadows
 - Questioning the environmentalist
 - For farmers, a necessary evolution to adapt to climate change and to maintain forage self-sufficiency

Practices that remain extensive

- Need to follow the strategy of adaptation to climate change on superficial soils
- Complementarity between temporary and permanent pastures
- Reintroducing biodiversity in temporary meadows, in crops (legumes and cereals...)

New challenges and questions

- Comté PDO supply chains considered as being responsible for local environmental problems :
 - Pollution of rivers by nutrients
 - Use of liquid manure
 - Inadapted facilities for water treatment at cheese processing level

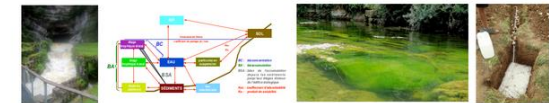


Presence of green algae in Loue river in 2014 and 2015

Source : Université de Franche Comté, Laboratoire Chrno-Environnement, Février 2020)



Étude de l'état de santé des rivières karstiques en relation avec les pressions anthropiques sur leurs bassins versants



Bilan des opérations réalisées et des recherches et analyses effectuées et disponibles

Rapport de synthèse grand public

Pierre-Marie Badot, François Degjorgi (rédacteurs et coordinateurs)
Participants : Eric Lucot, Audrey Bolard, Estienne Chanetz, Aveline Chiffre, Alexia Ducrot, Marc Steinmann, Nadia Crini, Caroline Amiot, Jean Claude Lambert, Jacques Mudry
Soutiens logistiques : Fédération de Pêche du Doubs, BE Sialis, Bi-Eau et Teleso
Laboratoires d'analyse : Chrono-environnement (CNRS-UFC) Qualio (Université de Franche-Comté), ABL Analytics (Porrentruy, CH), ISA (CNRS-Université de Lyon), Chimie Environnementale de l'EPFL (Lausanne, CH)

18 Février 2020

UMR 6249 CNRS-UFC et INRA Chrono-environnement - Univ. de Franche-Comté - Plaine de L'Étoile - F-25000 BESANCON CEDEX
Tel. 03 83 68 57 00 - Fax. 03 83 68 57 97 - pierre-marie.badot@univ-franche-comte.fr, francois.degjorgi@univ-franche-comte.fr

Source : Université de Franche Comté,
Laboratoire Chrno-Environnement,
Février 2020)

New challenges and questions

- Comté PDO supply chains considered as being responsible for local environmental problems :
 - Change in landscape and soil composition and quality due to the « casse-cailloux », a stone grinder
 - Used to destroy stones showing up at the surface or to re-open former meadows where trees have spread
- A major source of tensions between environmental NGOs, farmers, inhabitants, scientists, natural regional park etc...



New challenges and questions

- Building and keeping consumer trust



The screenshot shows the top navigation bar of the L'Est Républicain website in red, with categories like 'Actualité', 'Régions', 'Faits-divers', 'Sport', 'Culture - Loisirs', 'Magazine', and 'Services'. A yellow 'ABONNEZ-VOUS' button is on the right. Below the navigation, the breadcrumb 'Economie' is visible. The article title is 'Le comté accusé de polluer les rivières' under the sub-header 'Franche-Comté | Environnement'. The text begins with 'Après le rapport des spécialistes du laboratoire Chrono-environnement...'. The author is Bernard PAYOT, dated 28 July 2020.

Source : L'Est républicain, Juillet 2020



The screenshot shows the Le Monde website header with the logo and navigation menu including 'ACTUALITÉS', 'ÉCONOMIE', 'VIDÉOS', 'DÉBATS', 'CULTURE', and 'LE GOÛT DU MONDE'. The article title is 'Pourquoi le comté est accusé de polluer les prairies et rivières de Franche-Comté' under the sub-header 'VIDÉOS · PLAN B'. The text starts with 'Les producteurs de ce fromage...'. The author is Marc Bettinelli, dated 27 July 2020.



The screenshot shows a podcast player interface for RadioFrance. The title is 'Le comté, un modèle de production en question' with a subtitle 'Dimanche 4 juillet 2021'. The main image shows stacks of Comté cheese. A red 'ÉCOUTER (45 MIN)' button is at the bottom left.

Source : FranceInter/RadioFrance, Juillet 2021



The screenshot shows a Facebook Watch video player. The video title is 'Le Comté accusé de polluer' with a subtitle 'PLAN B | Pourquoi le comté est accusé de polluer le...'. The main image shows a man's face and a large wheel of Comté cheese. A play button is in the center, and the Facebook Watch logo is at the bottom right.

Source : Le Monde, Juillet 2020

Thank you for your attention

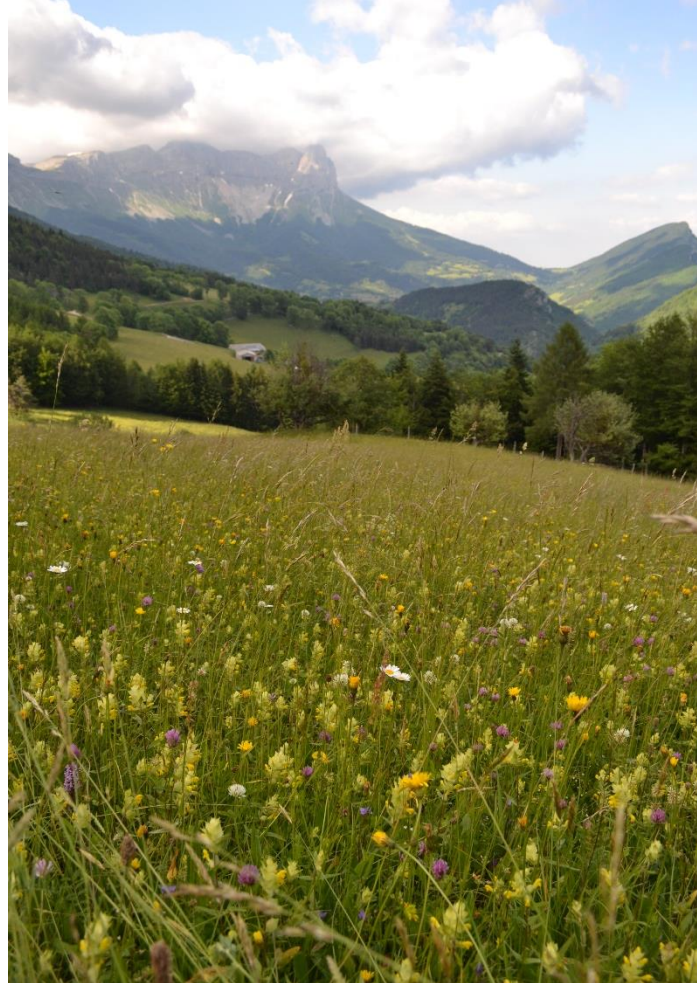


Photo : A Vincent

avincent@isara.fr

Field trip tomorrow

Taking the opportunity of meeting stakeholders to:

- Which strategy(ies) have been set up by local stakeholders to develop the area ?
- What are the strenghts and weaknesses of this/these strategy/-ies and of the actions put in place?
- Which are the future challenges and opportunities?

Using the « Socio-Ecological System (SES) » framework as a tool for carrying out your analysis

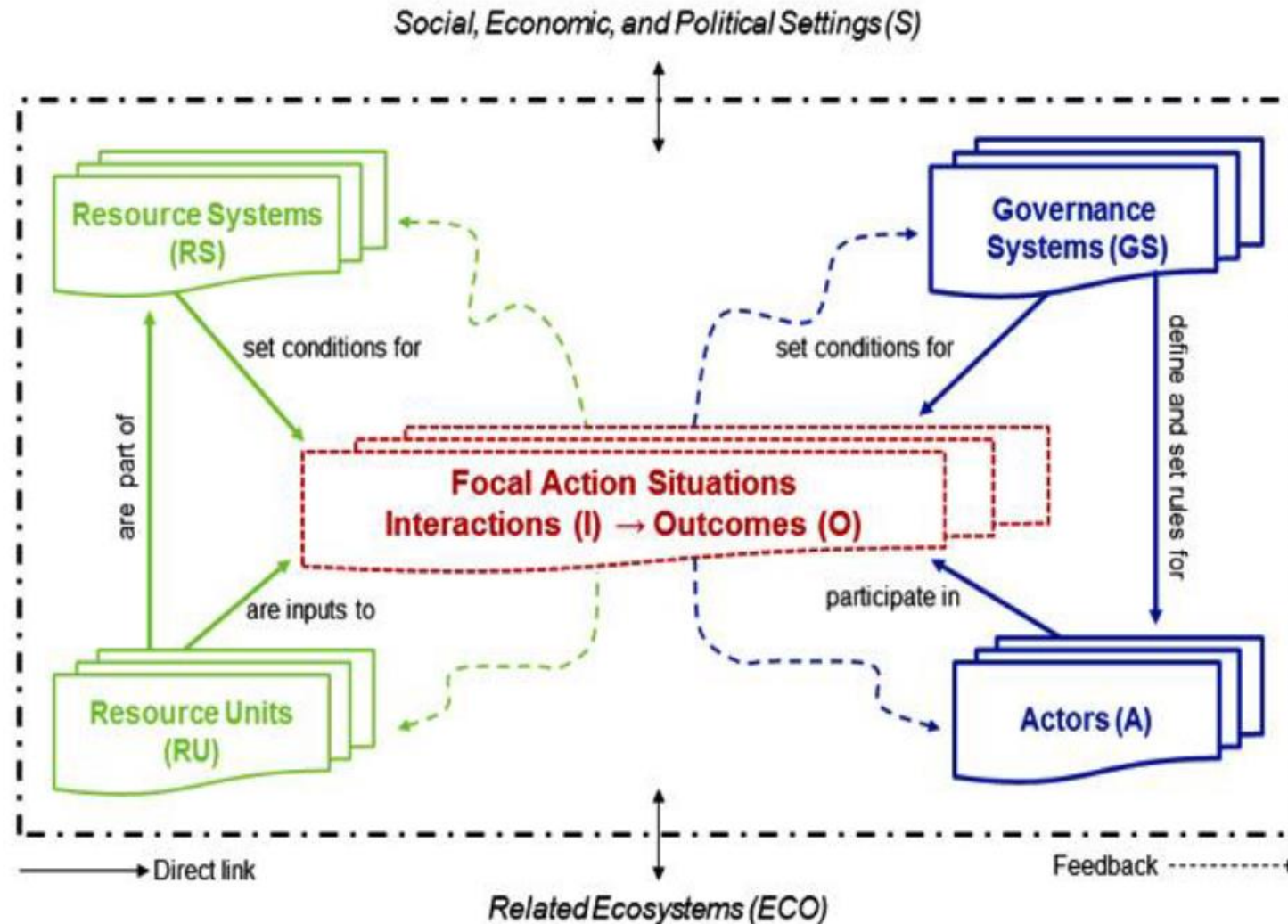
Central to SES framework of Ostrom is the theory of common-pool resources and collective self-governance

- The tragedy of the commons (Hardins 1968): privatisation versus state governance to address the sustainability of collective pastures (goods).
- The third way: societies/local communities have developed diverse institutional arrangements for managing natural resources and avoiding ecosystem collapse (collective action)

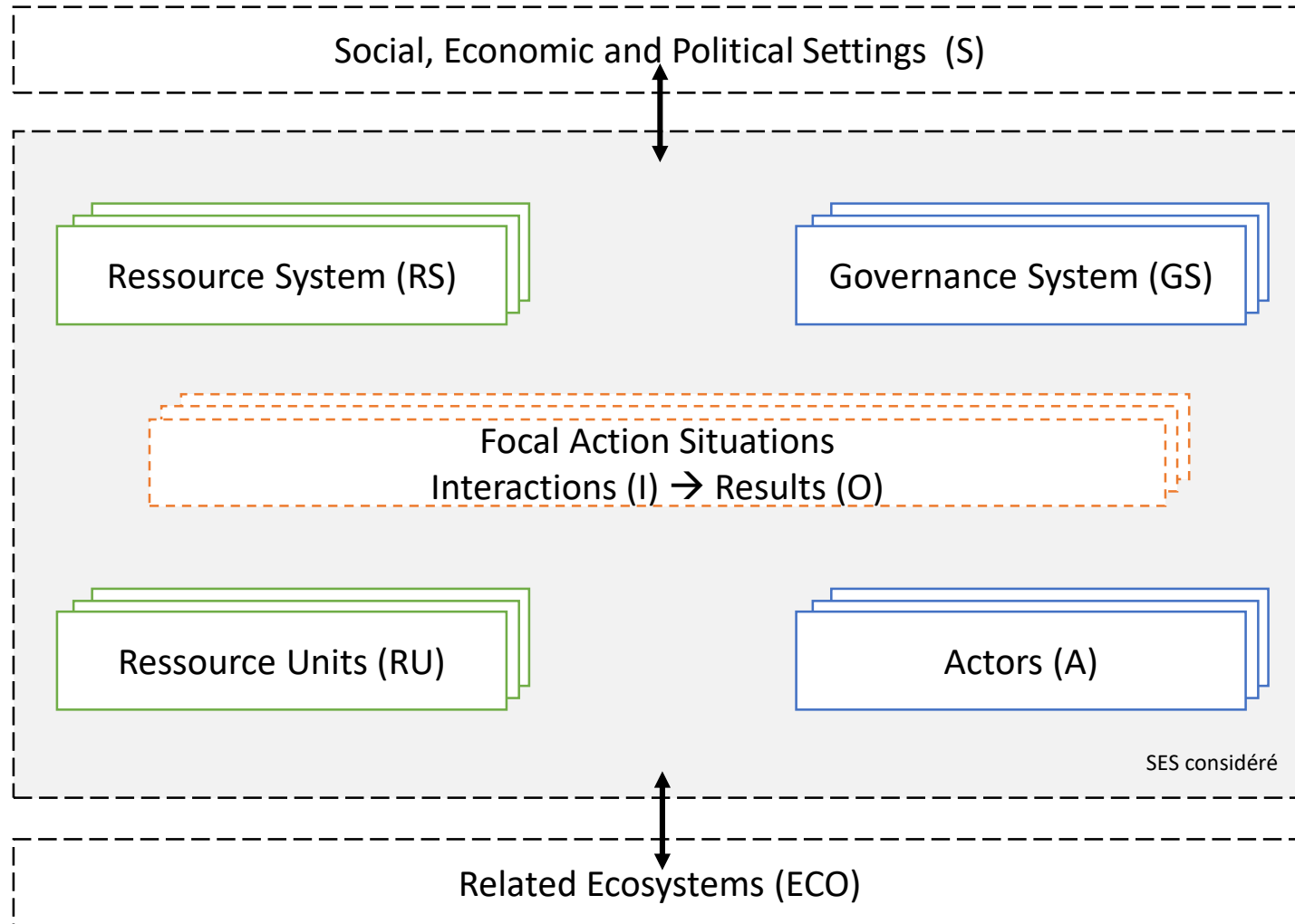
The Socio-Ecological System framework

- To understand (predict) why some systems work and why other collapse;
- To have a systemic approach to complex situation covering natural and social systems (inclusion of economic, environmental, social dimensions in a meaningful way)
- To capture transactions carried by actors in action situations while managing natural resources
- Analyse their sustainability

The « Socio-Ecological System » framework



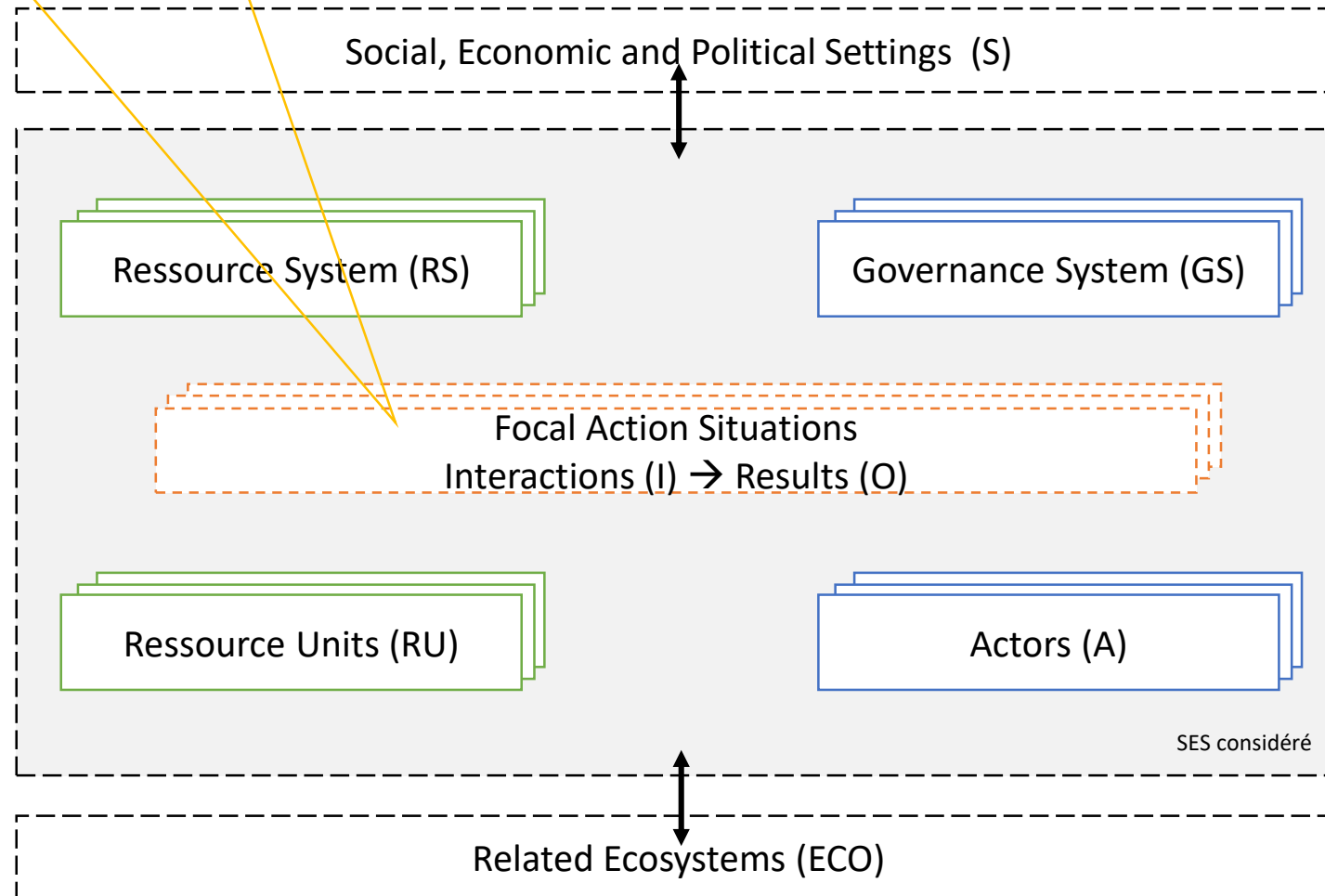
The Socio-Ecological System framework



The socio-ecological system framework

How do actors organize themselves to manage the resources (or farming systems) ?

What are the actions, rules and collective organizations in place?

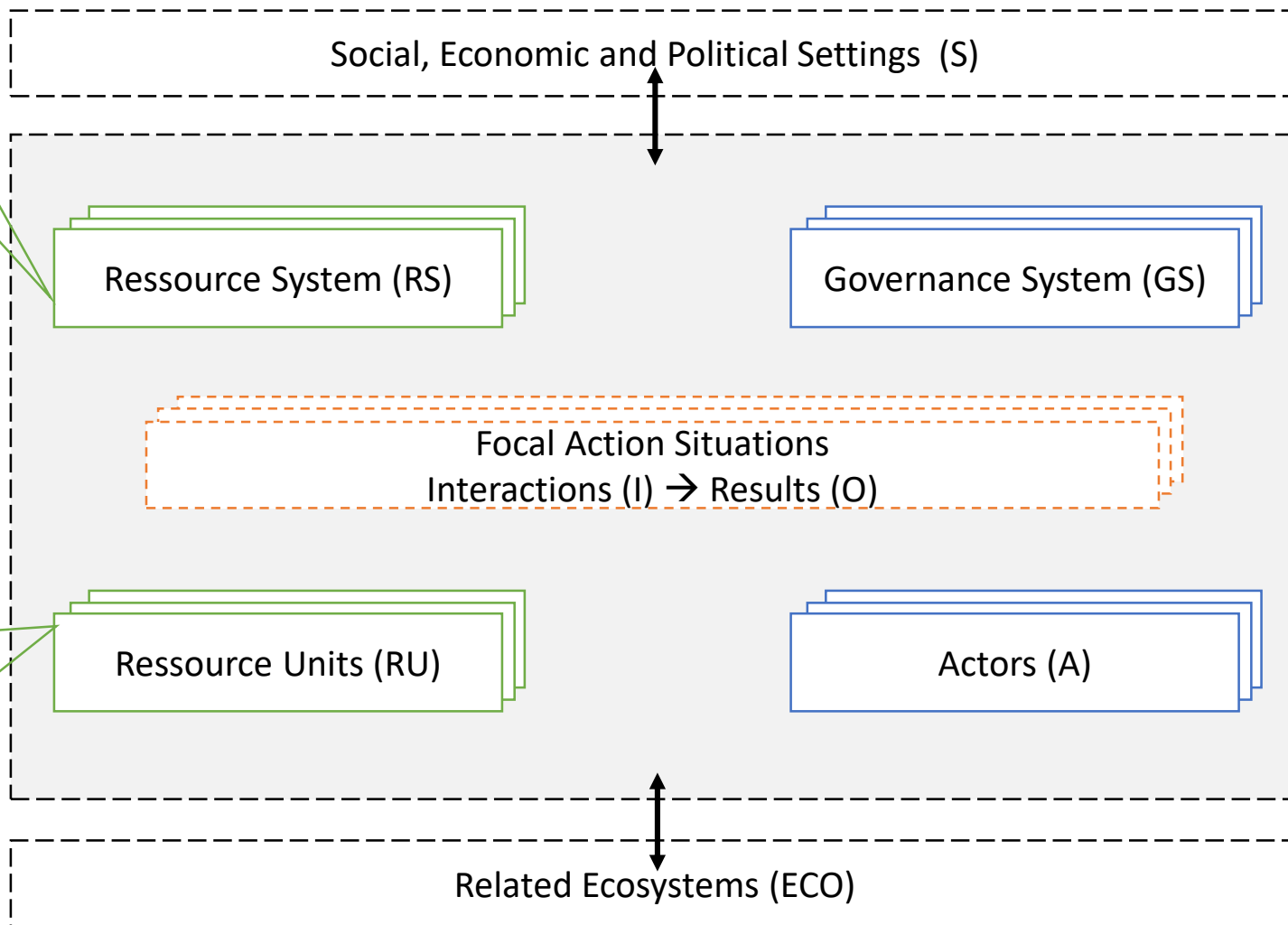


The socio-ecological system framework

What is the resource system that has to be managed ?

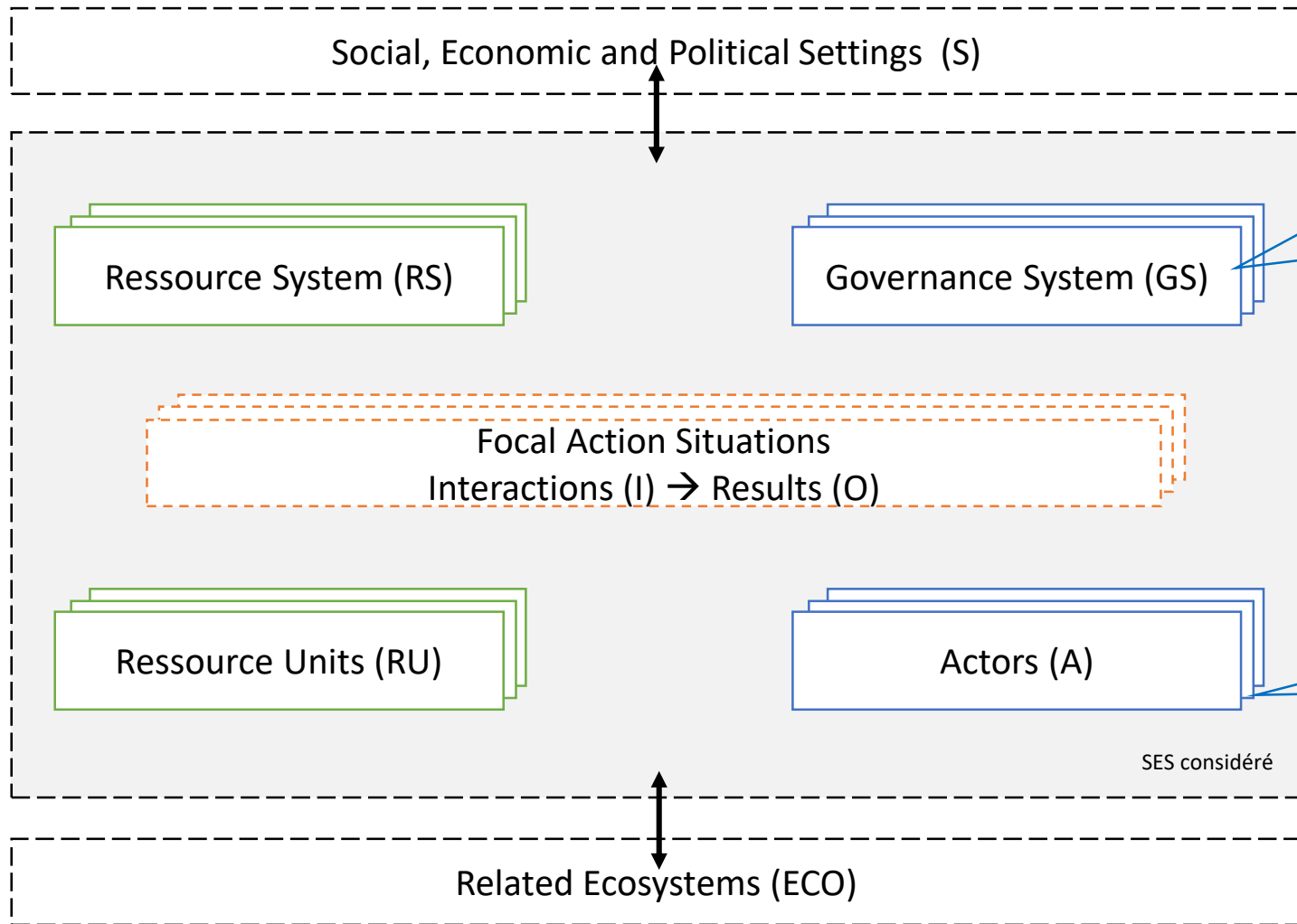
Ex: A forest, a farming production area

What are the main resource units (natural, human, anthropic, ...)?



Ex: Stock of fish, tree population, tons of agricultural products produced...

The socio-ecological system framework



What are the main governance systems that influence collective action?

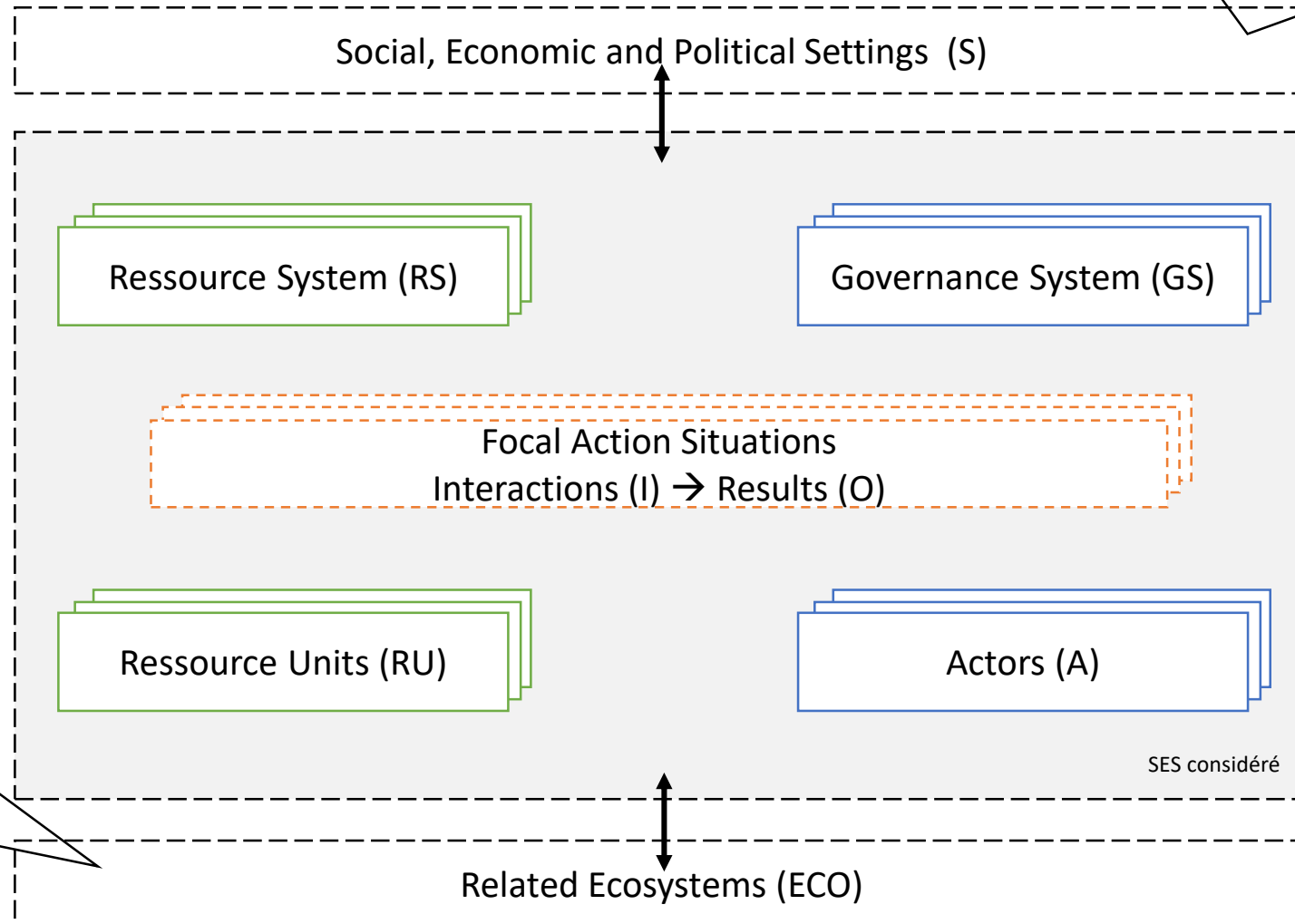
Ex: a regulation, an informal agreement, a management committee

Who are the main actors involved in the governance of the resource?

Ex: Cooperative, farmers, natural regional park + their objectives...

the « socio-ecological system » framework

What are the natural factors that may influence the resource or its management?



What are the natural factors that may influence the resource & its management?

Example of use

Resource System
27 municipalities in PDO Bleu de Vercors Sassenage
70 farms, with 60 delivering milk and 10 producing farm cheese (average size: 40 ha)
Mountain farming based on permanent and temporary grasslands
Disappearance of farms

Resources Unit
Around 6 000 000 liters of milk collected/year (4 000 to 6 000 liters per cow)
Milk paid +20%/ average departmental price for 3 years and same price before.

Focal action situation: preservation and development of a mountain agriculture based on a quality cheese and the use of local resources: meadows, alpine pastures, dairy breed, local know-how

Interactions
Practices: high organic and limited mineral fertilization of meadows to ensure high production and quality.
Controversy about 2 models of agro-ecology: patrimonial approach (fodder autonomy with intensification) and territorial differentiation of the cheeses versus biodiversity approach (only permanent meadows mainly extensively managed) as a guarantor of the cheese quality

Outcomes
Ecological: Intensive meadows cover 43% of the surface of meadows, land abandonment on slopes
Economic: income of farmers remains insufficient to ensure the sustainable maintaining of farms
Social: strong collective organisations but few links between them

Governance
Decision structures
Food system and marketing strategies
SIVER and coop
Environment and biodiversity (Agri environmental measures) : Park and NGOs, some farmers
Technical management of agriculture
land and livestock: chamber of agriculture and farmers
Few links between them excepted by the agricultural advisor of the Park
Rules: PDO specification, Charter of the Park, European norms for production/ transformation

Actors
Agriculture and transformation system:
Cooperative Vercors lait, SIVER (inter-professional union for Bleu), Local Union of farmers, some private dairies, chamber of agriculture
Norms: economic viability of farms and enterprises
Local development and environment
Natural Regional Park, local communities, environmental NGOs
Norms: local development, preservation of environment

Source: Guisepelli et al., 2018