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## Determinants of vulnerability in mixed-crop-livestock farming systems - a 14 years retrospective A focus on results

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### ► To cite this version:

Inès Sneessens, Hanitra Randrianasolo-rakotobe, Loïc Sauvée, Stéphane Ingrand. Determinants of vulnerability in mixed-crop-livestock farming systems - a 14 years retrospective A focus on results. International conférence Coping with risks in agriculture: What challenges and prospects?, Feb 2018, PARIS, France. hal-02785171

**HAL Id: hal-02785171**

**<https://hal.inrae.fr/hal-02785171>**

Submitted on 4 Jun 2020

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**INTERNATIONAL CONFERENCE**  
Coping with risks in agriculture: What challenges and prospects?

**Determinants of vulnerability in mixed-crop-livestock  
farming systems - a 14 years retrospective**  
**A focus on results**

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*22-23 February 2018, Collège des Bernardins, Paris*

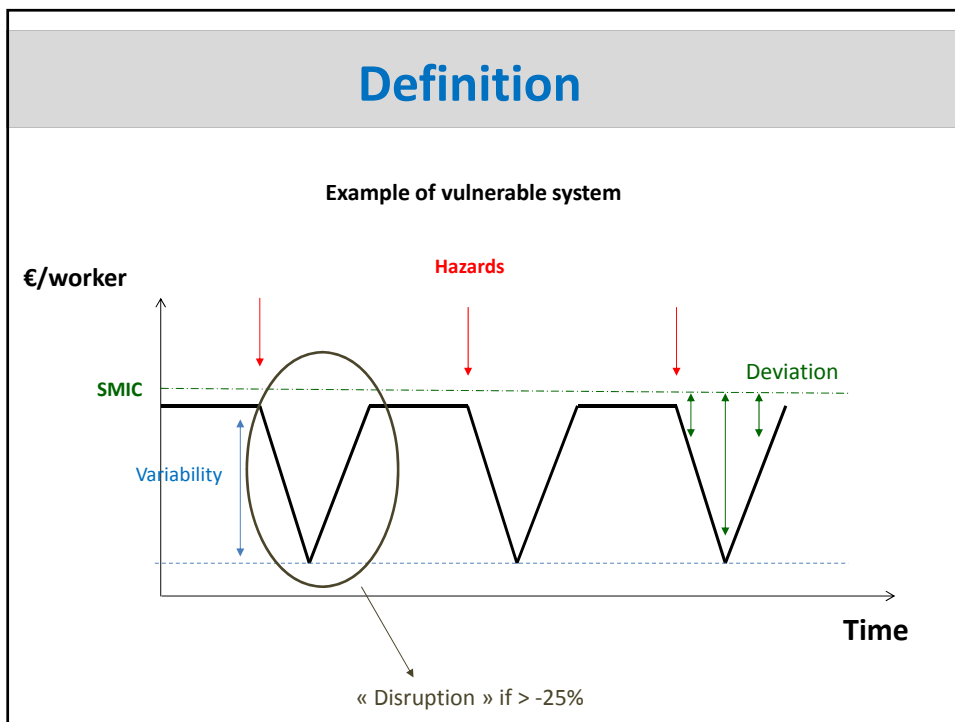
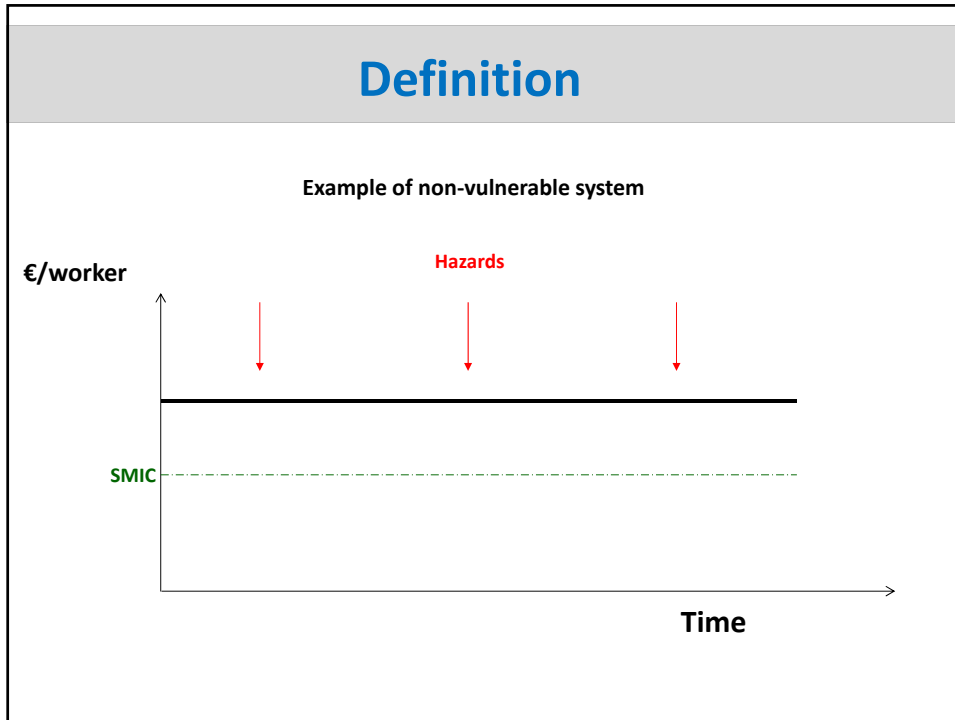


## Objective

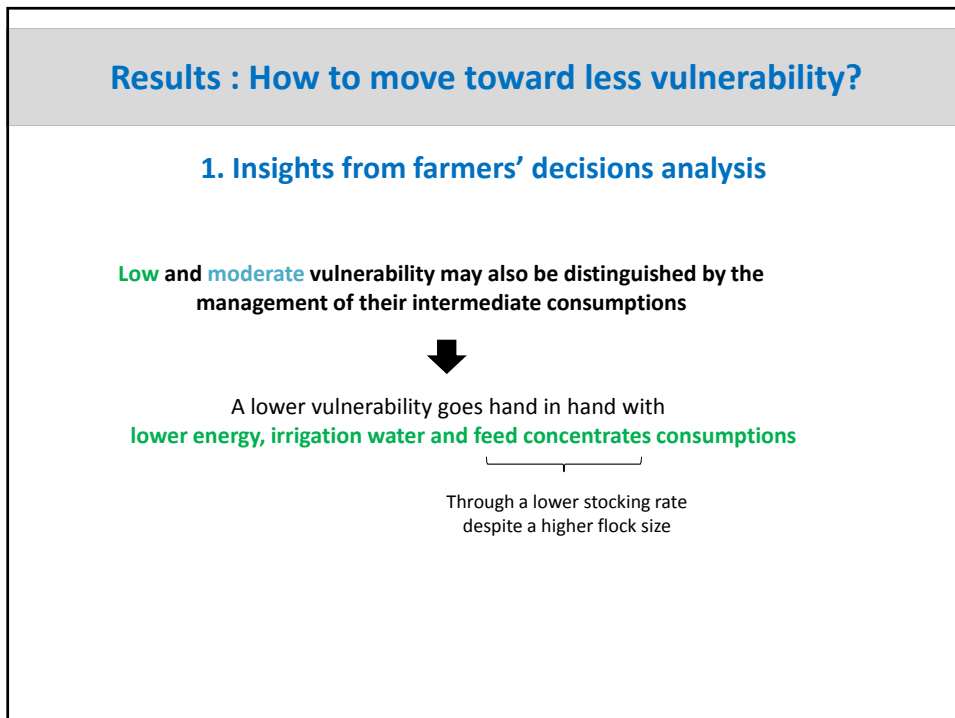
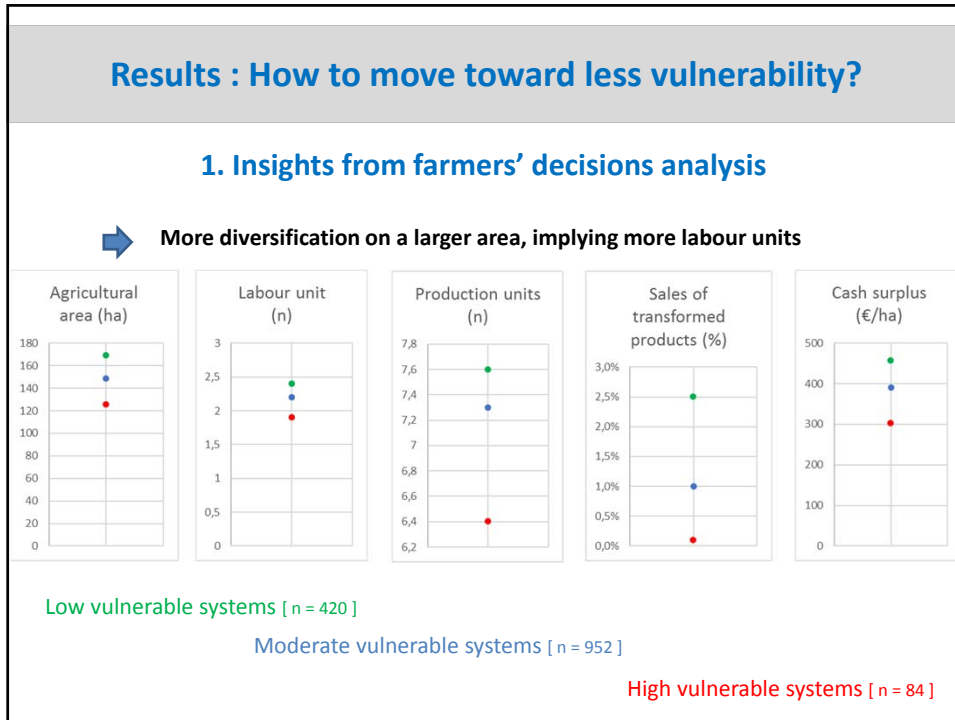
**To reduce economic vulnerability of farming systems**

→ **Define & measure vulnerability**

→ **Identify the explaining factors**



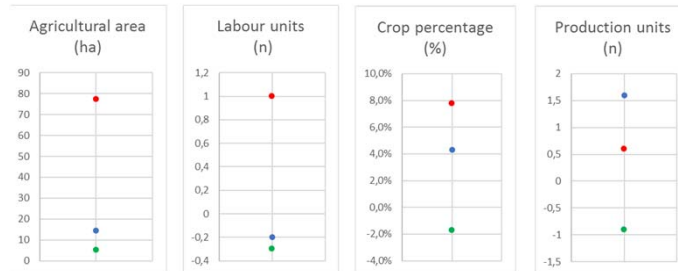




## Results : How to move toward less vulnerability?

### 2. Insights from production strategy evolution

Identification of three profiles “No evolution”, “Moderate evolution”, “High evolution”



## Results : How to move toward less vulnerability?

### 2. Insights from production strategy evolution

- 54% of low vulnerable systems were already “adapted”  
⇒ Low vulnerable farming systems with the profiles “No evolution”
- 24% of the most vulnerable systems have shown adaptive capacity but not sufficiently to be considered as « low vulnerable » farming systems  
⇒ Vulnerable farming systems with the profiles “Moderate evolution”, “High evolution”



Production strategy evolution is not obligatory to be low vulnerable across years, BUT may be obligatory for some non-adapted systems

## Results : How to move toward less vulnerability?

### 3. Insights from tactical adjustments analysis

#### Tactical adjustments : Identification of five profiles

- Of which 4 with tactical adjustments, based on
    - Self-consumption
    - Stocking rate & irrigation
    - Fertilizers and seeds consumption
    - Feed concentrates consumption
  - Of which 1 without tactical adjustments
- « Flexible » farming systems  
61.7% have a moderate to high vulnerability level
- « Rigid » farming systems  
67.2% have a moderate to high vulnerability level



Low vulnerable farming systems apply to both “rigid” and “flexible” farming systems

## Discussion & Conclusion

#### → Method : Perspectives for research and operational projects (farm advisers, etc.)

- **Not focused** on one specific external stressor, but on all hazards that occurred during a given period of time
- **Focused** on economic vulnerability, considering the farming system as a whole
- Consideration of “static” and “dynamic” factors

#### → To be tested on other farming systems (specialized farms, etc.)