

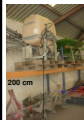
Modelling vulnerability to flooding: A systemic approach on farms of the Rhône River Delta

Bremond P.*, Abrami G.*, Blanc C.*, Grelot F.*

1 Agriculture and flood risk on the Rhône River Delta



Rhône river watershed:
95 500 km²
Rhône river delta:
10 000 km²
Agricultural activities exposure:
3000 farms
1000 km²



1 Flood management policies implemented on the Rhône River Delta:
- Floodplain restoration
- Adaptation (vulnerability mitigation)

Complex effects that concern every farm components and farm recovery

2 Willingness of local water authorities to have an economic tool (Cost Benefit Analysis) to help decision making

Rationale of the approach: A model of farm vulnerability which takes into account damage on every farm components and farm activity is required to appraise new flood management projects.

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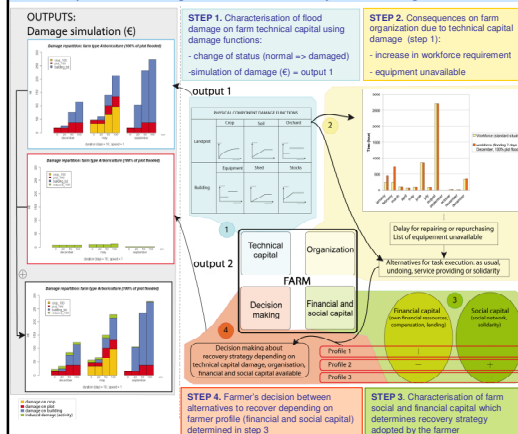
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2 Conceptual modelling of farm vulnerability and damage simulation



3 Applications

- Characterisation of farm vulnerability for different flood scenario (damage type that represents the larger share of the total amount, see damage simulation)
- Efficiency appraisal (Cost Benefit Analysis) of measures to mitigate farm vulnerability that are planned on Rhône River Delta: comparison of the cost of implementation and maintenance and the mean annual avoided damage for two farm types

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