

SOCIAL LEARNING FROM FARMERS' EXPERIENCE AND BEHAVIOR: A TRIPLE-LOOP ANALYSIS ON CLIMATE CHANGE AWARENESS, PERCEIVED IMPACTS, AND ADAPTATION



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AGU FALL
MEETING

SCIENCE
is SOCIETY





MOTIVATION, AIM AND METHODS

- Climate change is often seen as a **distant psychological risk**
- Farmers can provide **first-hand observations**
- Accurate **bottom-up knowledge** to re-think local and regional policies

A triple-loop overview of farmers' perception on climate change



Awareness



Impacts



Adaptation

Seeing is believing...



Bibliometrics + SLR
WoS and Scopus
2010-2020

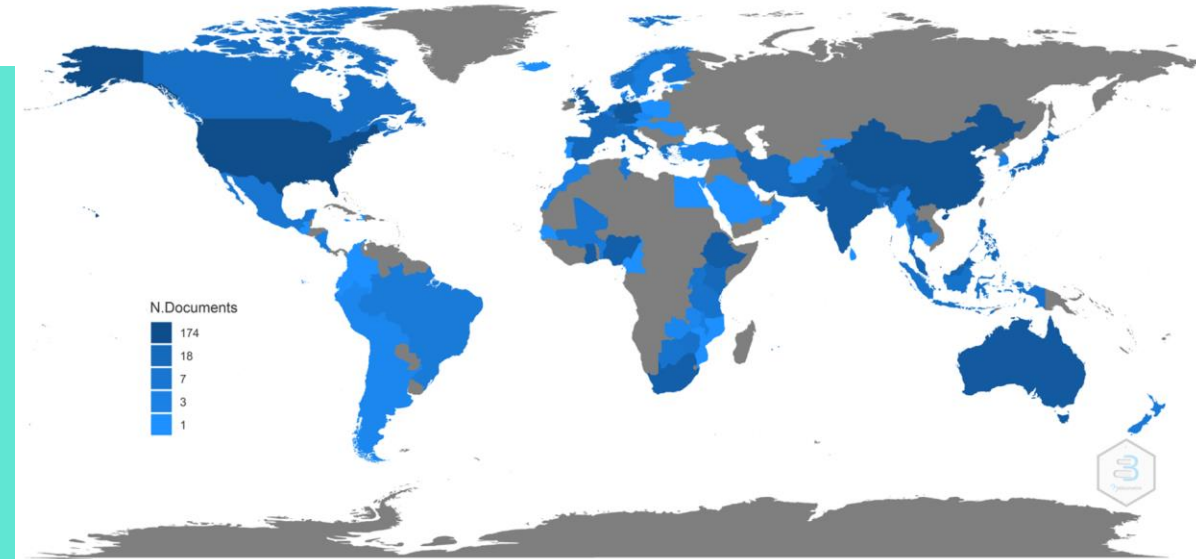


BIBLIOMETRICS

- 1,428 authors – 669 institutions – 65 countries
- 174 journals on climatic sciences, sustainable development, and natural resources management
- **Growing interest:** 85% papers published between 2015–2020
- **Methodological tools:** survey, interviews, risk assessment, cost-benefit analysis, indicators
- **Addressed topics:** impacts on food production, crops vulnerability, crops choice, and adaptation to extreme weather events

Country scientific production

435 papers



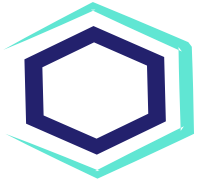
Most used keywords+





LITERATURE REVIEW

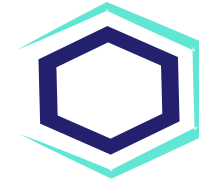
108 papers



Awareness



Impacts



Adaptation



Climate change is not neutral:
 ≠ evaluations of impacts
 ≠ strategic actions

Awareness is not neutral:
 Most of farmers agree with statements that **climate change is occurring**

Most of them highlighted that **climate is changing because of human activity**

13 impacts

Top-3

- Rising and extreme temperatures
- Changes in rainfall pattern
- Increase of drought periods and dry spells

Crop production
 Pest and diseases
 Soil fertility and land degradation



11 measures

Top-3

- Changing cropping patterns
- New crop varieties
- Soil and water conservation techniques

Simultaneously
 Reactive vs preventive
 Short-long term benefits
Lack of information/knowledge

THANK YOU



More details on the narrated



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