Financial support *Technical and political support* *Students who did surveys*

Water reuse in France

Social perception of an unknown practice

Patrice GARIN
Marielle MONTGINOUL
Benjamin NOURY

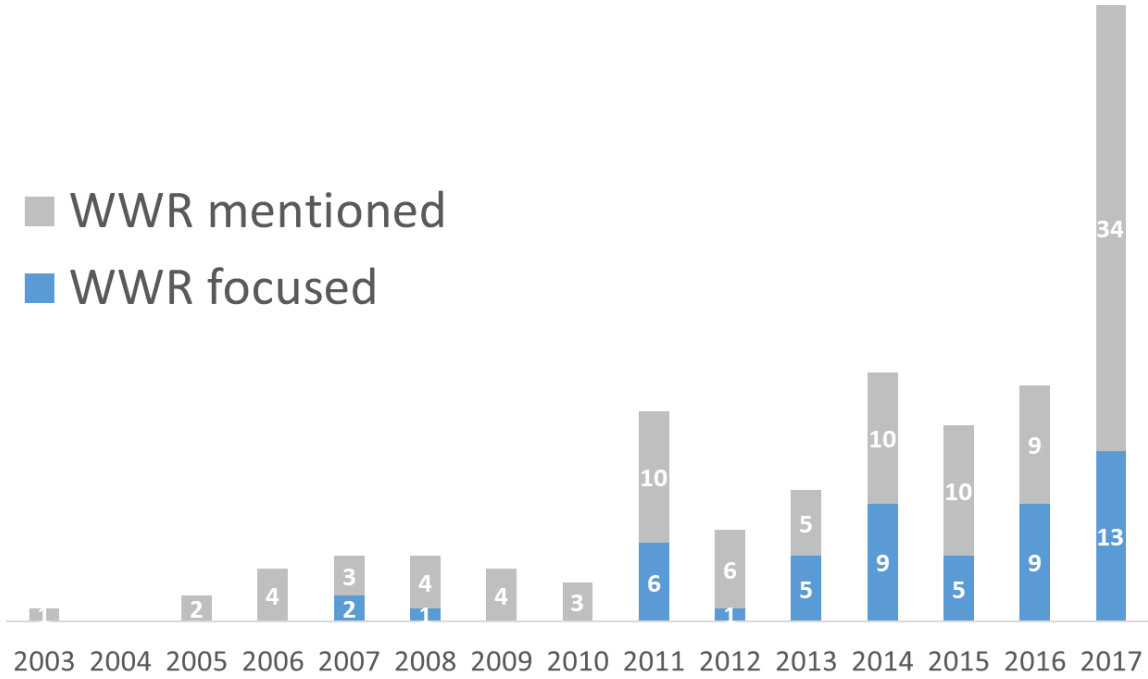
INRAE G-Eau
Montpellier (France)

Sopolo project

INTRODUCTION
Wastewater reuse in France

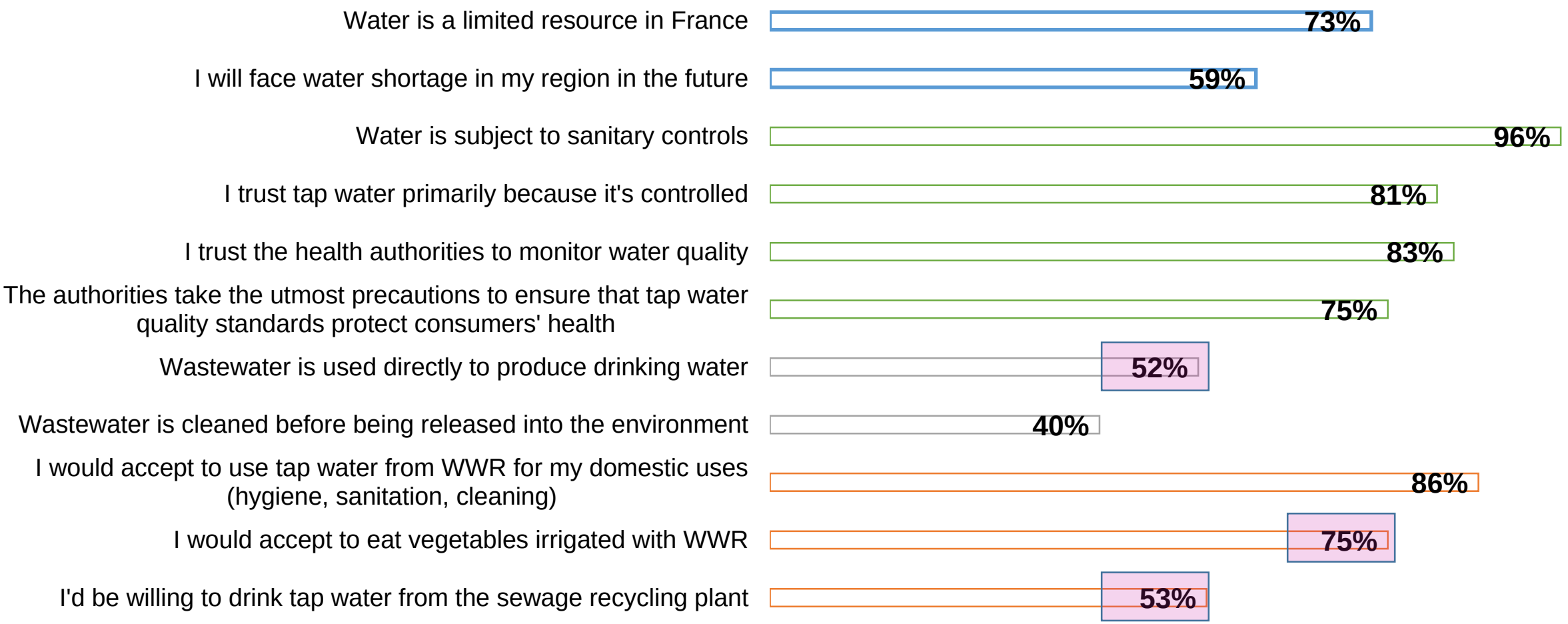
- Only few local cases

- Receiving very little media attention



156 French newspaper articles (2000 – 2017)

Wastewater reuse: object of misleading interpretation but of positive opinion



Key assertions in relation to WWR given by people interviewed in the 2018 French national barometer

(Centre d'Information sur l'Eau & TNS Sofres 2018).

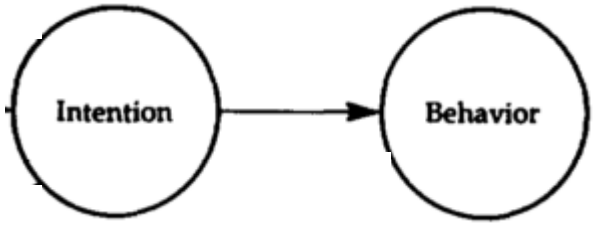
THE QUESTION

Public acceptance of « products » made with reclaimed water

(Planned behavior – Icek Ajzen, 1991)

Recreational uses

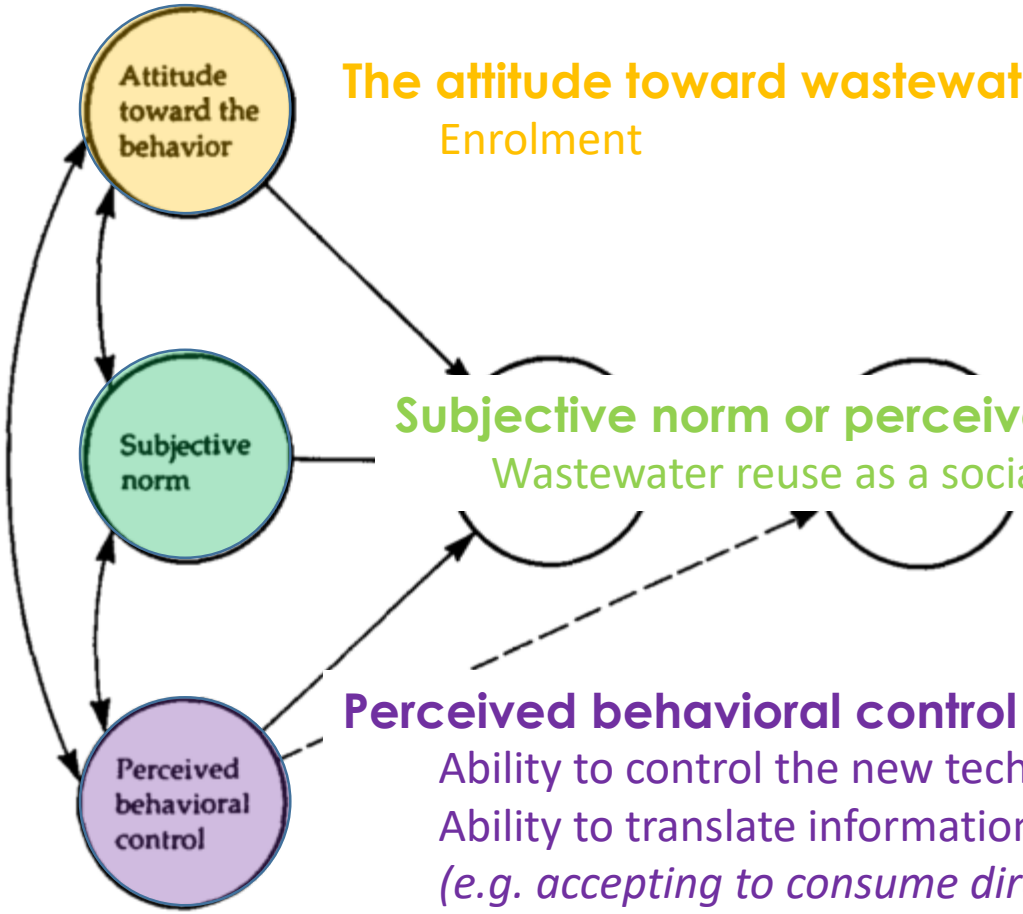
Agricultural uses



THE QUESTION

Public acceptance of « products » made with reclaimed water

(Planned behavior – Ajzen, 1991)



The attitude toward wastewater reuse

Enrolment

Subjective norm or perceived social pressure

Wastewater reuse as a social object considered as rewarding

Perceived behavioral control

Ability to control the new technology

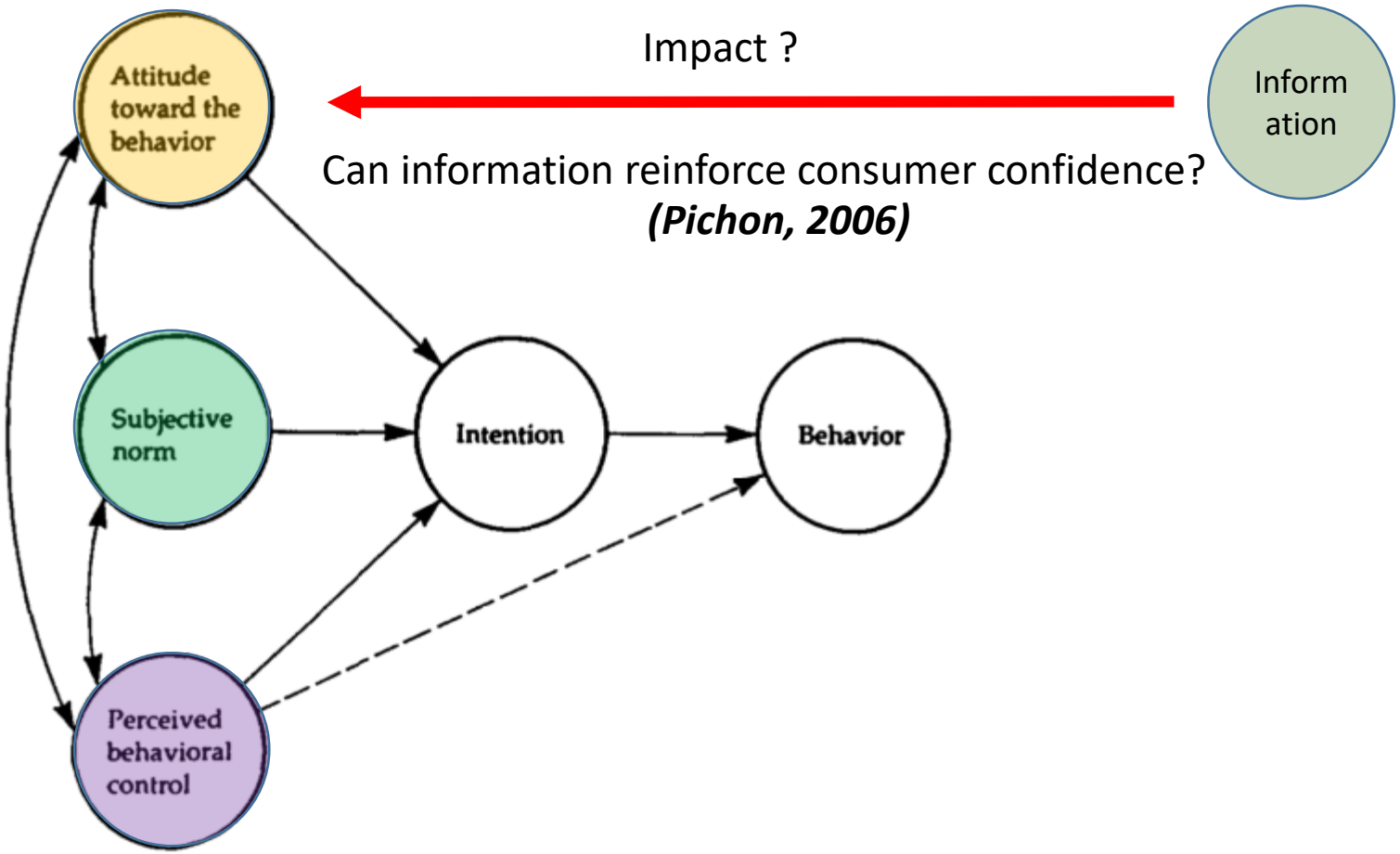
Ability to translate information into action - working knowledge (Darby, 2010)

(e.g. accepting to consume directly or indirectly reclaimed water for such use)

THE QUESTION

Public acceptance of « products » made with reclaimed water

(Planned behavior – Ajzen, 1991)



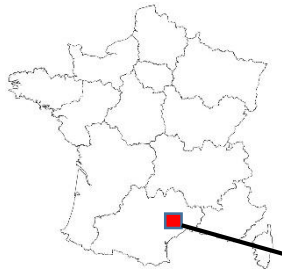
Can information reinforce consumer confidence?

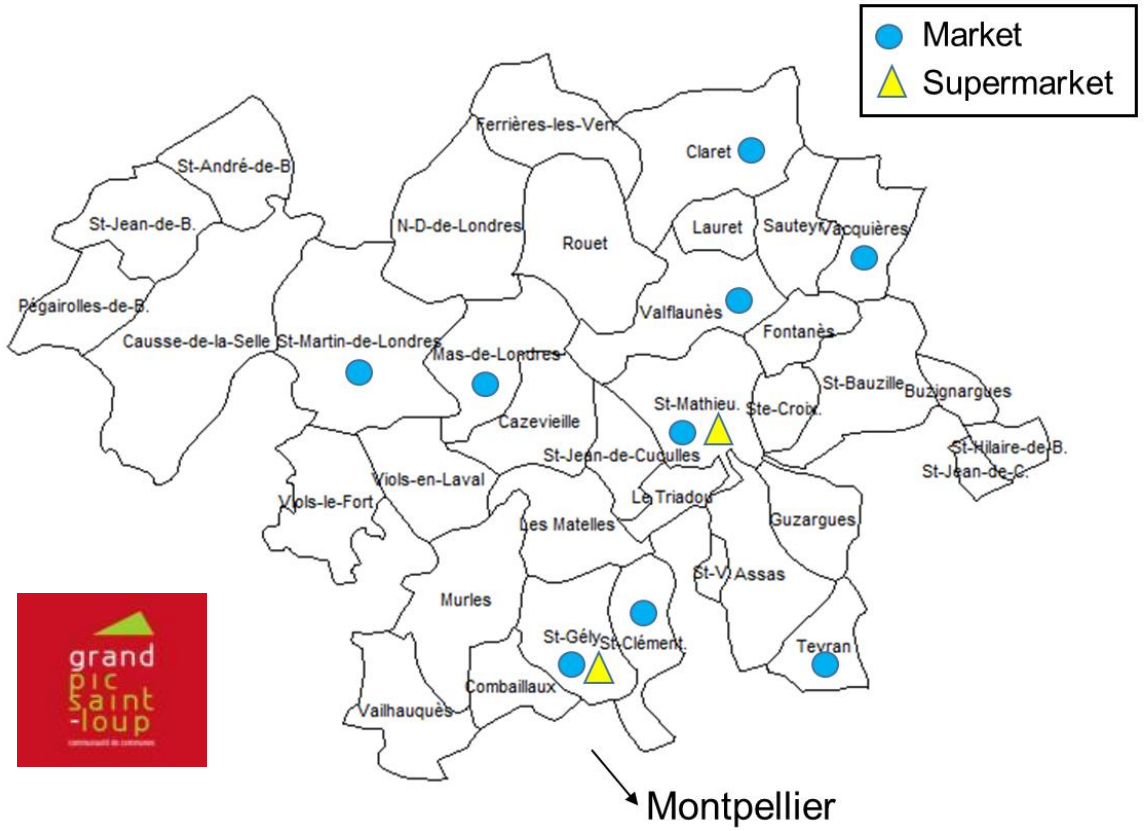
(Pichon, 2006)

SOCIAL PERCEPTION OF AN UNKNOWN PRACTICE

Household survey

845 questionnaires in 10 municipalities





4 steps:

1. Social representation
2. Factors influencing attitude
3. Role of information
4. Behavioral intention

RESULT 1.

On social representation of « Treated wastewater »

Give me 3 words that come to mind when you think of “treated wastewater“

Order them of importance

		Level of interest	
		High (rank<2)	Low (rank ≥ 2)
Frequency of occurrence	High (≥ 10%)	The core: quantitative and qualitative centrality area	First perimeter
	Low (<10%)	Contrasting elements	Second perimeter

(Abric, 2003)

RESULT 1.

No social representation of « Treated wastewater »

Give me 3 words that come to mind when you think of “treated wastewater“

Order them of importance

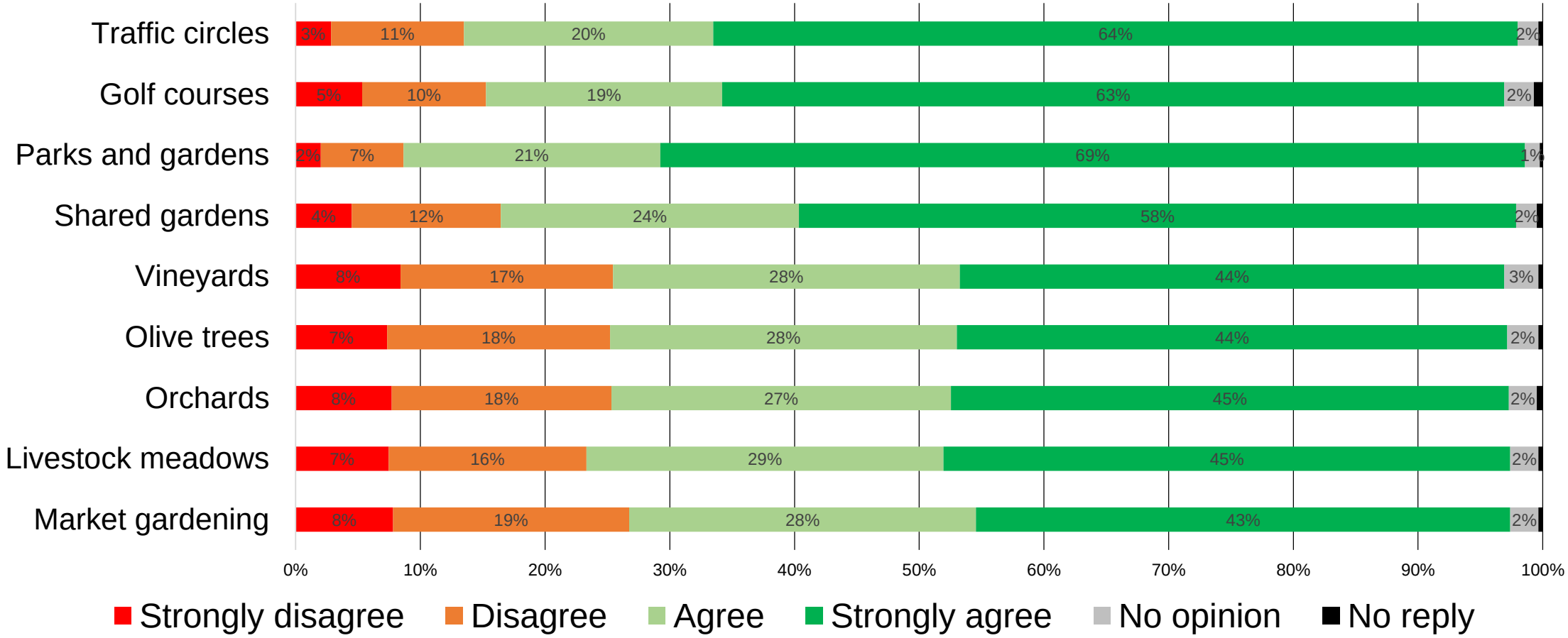
		Level of interest	
		High (rank<2)	Low (rank ≥ 2)
Frequency of occurrence	High (≥ 10%)	Wastewater treatment plant (16%)	None
	Low (<10%)	Recycling (9%), environment (7%), treated wastewater (6%), sanitation (4%), pollution (4%), dirt (3%), clean (3%), water (3%), water saving (3%), positive opinion (2%), process (2%), cost (2%), potable (2%), septic tank (1%)	Toilet (2%), disgust (1%), network (1%), organic pollutant (1%), chemical process (1%), waste (1%), …

RESULT 2.

Citizens see WWR as an opportunity

RESULT 3.

Citizens well intentioned toward WWR, and even more so as the usage is far distant



RESULT 3.

Citizens well intentioned toward WWR,
and even more so as the usage is far distant

	Parks and gardens	Wine	Market gardening
Disgust	-	-	-
Environmental sensitivity	+	+	+
Risk perception	-	-	-
Information		+	+
Trust in technologies	+		
Gender			Women (-)
Age			
Information habits			

Explaining factors influencing attitudes

RESULT 4.

The effect of information on consumer confidence

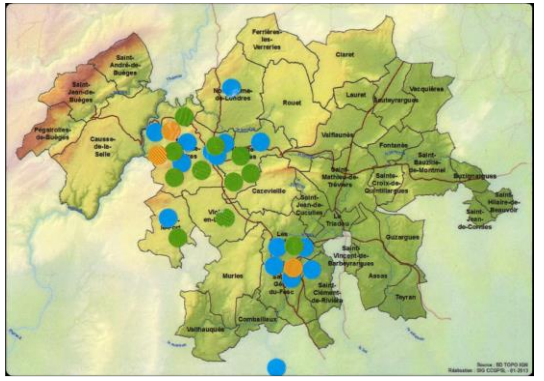
No information
(204)

Neutral information
(308)

Persuasive information
(176)

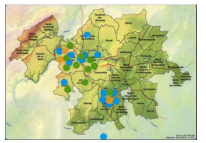
Do you support local food systems? Is yes, stick a blue tag

Commitment
(155)



RESULT 4.

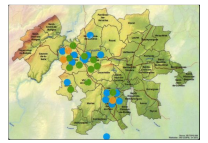
Citizens trust neutral information more than positive information



		No information N = 204	Neutral N = 309	Persuasive N = 176	Commitment N = 154
Recreational uses	Strongly disagree	2%	3%	3%	5%
	Disagree	11%	7%	6%	13%
	Agree	21%	16%	27%	19%
	Strongly agree	64%	72%	62%	61%
	No opinion	*1%*	*2%*	*2%*	*1%*
Agricultural uses	Strongly disagree	8%	8%	4%	8%
	Disagree	22%	12%	17%	18%
	Agree	28%	23%	32%	29%
	Strongly agree	37%	55%	44%	44%
	No opinion	*3%*	*2%*	*3%*	*2%*

RESULT 5.

A change in purchasing habits with a great economic impact on local producers

Attitudes	No information			Information		
	No purchase	Purchase	Don't know	No purchase	Purchase	Don't know
Disagree	76%	13%	38%	75%	7%	48%
Agree	22%	86%	31%	23%	91%	41%
No opinion	2%	1%	31%	2%	2%	11%
Total	**26%**	**66%**	**8%**	**20%**	**75%**	**5%**

Behavioral intentions (case of wine)

RESULT 6.

A strong cohesion between attitudes and behavioural projections …

RESULT 6.

A strong cohesion between attitudes and behavioural projections, but some apparent contradictions

CONCLUSION

Social perception of an unknown practice

- **Some confirmations** (national statistics + literature on sociotechnical factors influencing attitudes of WWR):
  - An unknown practice
  - Information plays a role on the social perception of WWR
  - Key factors: perception, disgust, type of use
- **Warnings**:
  - Only a survey on attitudes and behavioral intentions on an unknown practice, no observation
  - Currently ignored by the media
- **The communication paradox**:

  By communicating, agricultural producers would strengthen the social acceptability of their project at the expense of a potential loss of customers.

CONCLUSION

Quelques informations complémentaires sur un échantillon de “sachants”

- **Etudiants master eau** (santé, société, littoral, hydrologie, hydrogéologie, agriculture) + COPIL Sopolo
  - = 128 personnes ayant totalement répondu ou fait la demarche (intention – goûter)
- **¾ estiment que** “*les connaissances sont trop lacunaires pour dire que les EUT peuvent être utilisées sans risque pour la santé*”**.**

  Le sentiment de dégoût vient renforcer la perception de risques persistants.

  Le dégout est beaucoup moins répandu mais décisif dans l’intention d’achat

  Grand défi de confiance dans la filière

Merci

Pour en savoir plus :

Garin, P., Montginoul, M., Noury, B., 2021. Waste water reuse in France – social perception of an unfamiliar practice. Water Supply 21, 1913-1926.

Marielle Montginoul
Marielle.montginoul@inrae.fr