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## Contribution of perceptions to the acceptability of adaptation tools to sea level rise

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## Supplementary Material

for

### Contribution of perceptions to the acceptability of adaptation tools to sea level rise

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## Appendix A – Questionnaire

### LOCATION

What is your municipality of residence: Postal code: \_\_\_\_\_

To what extent did the proximity of the sea influence your choice of housing?  
Give a score from 0 to 10 \_\_\_\_\_

Do you live in an area close (less than 1 km) to the beach and the sea? Yes/No

How long (in years) have you lived in this area? \_\_\_\_\_

Do you have sea view ?

<input type="checkbox"/> Yes directly	<input type="checkbox"/> Yes by far	<input type="checkbox"/> No
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### PERCEPTION OF FLOOD RISK IN COASTAL MUNICIPALITIES

What do you think about the risk of sea level rise in your region?

<input type="checkbox"/>	It will have to be considered in the next ten years
<input type="checkbox"/>	It will have to be considered but more than ten years later
<input type="checkbox"/>	The rise will not be significant and therefore it is useless to worry about it
<input type="checkbox"/>	Forecasts are not proven
<input type="checkbox"/>	I Don't know

What do you think of the following comments made by local people? Give a score from 1 (totally opposed) to 10 (totally agree)

	Totally agree		Somewhat agree		Somewhat disagree		Not at all in agreement		Totally opposed	
	10	9	8	7	6	5	4	3	2	1
We cannot fight against the rising sea	Give your rating _____									
We could live in stilt houses	Give your rating _____									

What do you personally fear an increased frequency of marine flooding?

Choose the two items that you consider to be top two priorities	Priority choice N°1	Priority choice N°2
None I am not exposed		
Risk to your own as well as family lives		
Possible depression or stress		
Loss of property value of my home		
Major damage to your home, equipment, vehicle		
Increase in insurance contributions		
Tax increases in the medium term		

Are you sensitive to red weather alerts? (Tick only 1 answer)

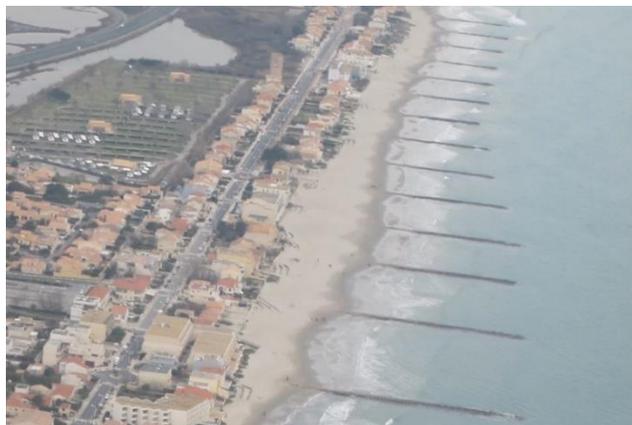
<input type="checkbox"/>	No
<input type="checkbox"/>	Yes, I pay attention, but I don't change my habits
<input type="checkbox"/>	Yes, I pay attention to it and adapt my behavior accordingly
<input type="checkbox"/>	Yes, I listen regularly, and I am very anxious

In red alert situations, do you actively seek information, for example by consulting the “Météo France” website or French weather forecast website? Yes/No

**RELOCATION POLICIES**

Current adaptation policies dedicated at managing erosion and flooding on the coast consist of building groynes or breakwaters and recharging beaches with sand.

**Groynes**



**Breakwaters**



**Beach Nourishment**



In the medium term (i.e.after 2050), the sea level rise will lead to the flooding of low-lying areas and an increase in the violence of storms due to the additional water level. As a result, measures might be taken to relocate the roads and/or houses on the sea front, that are most at risk. The aim of these measures is to reduce material losses, physical dangers and environmental degradation.

What type of policy do you consider the most appropriate to adapt to sea level rise? (Tick one answer only)

<input type="checkbox"/>	Building of dikes
<input type="checkbox"/>	Building of breakwaters to reduce the force of the waves
<input type="checkbox"/>	Relocation of roads and houses
<input type="checkbox"/>	Setting up houses on stilts

	Your score from 1 to 10
<b>Do you think that the type of measure you chose in the above question is also the one preferred by the other inhabitants of your commune?</b>	
<b>Do you think that the type of measure you chose in the above question is also the one that is prioritised by public policy makers?</b>	

**Relocation measures are: (Tick only 1 answer)**

<input type="checkbox"/>	An utopia
<input type="checkbox"/>	An opportunity
<input type="checkbox"/>	A hope
<input type="checkbox"/>	A prejudice
<input type="checkbox"/>	A inevitable threat,

**Are you in favor of relocating the houses most at risk of flooding?**

**Give a score from 1 (totally opposed) to 10 (totally agree)**

Totally agree		Totally agree		Somewhat agree		Somewhat disagree		Not at all in agreement		Totally opposed
10	9	8	7	6	5	4	3	2	1	

**Do you find it courageous for an elected official to implement a relocation policy?**

**Give a score from 1 (totally opposed) to 10 (totally agree)**

Totally agree		Totally agree		Somewhat agree		Somewhat disagree		Not at all in agreement		Totally opposed
10	9	8	7	6	5	4	3	2	1	

**Do you think your house could be affected by relocation? Yes/No/Don't know**

**In your opinion, how significant would be the value decrease of frontline housing as a consequence of recurrent flooding and damage?**

<input type="checkbox"/>	No impact
<input type="checkbox"/>	10 to 30%
<input type="checkbox"/>	30 to 50%
<input type="checkbox"/>	50 to 70%
<input type="checkbox"/>	Goods would become unsaleable

**If you were relocated elsewhere, can you grade the expected consequences of it,**

	Grade from 0 (no change) to 10 (very negative effects)
I would be separated from my neighbours and friends	
I would have to change my habits (doctor, shops, children's school, work ...) or make longer drive	
I would no longer see the sea or I would be less close to it	
I could no longer live in the place where I have my memories	
Other, specify	

**Do you agree with the following statements?**

Totally agree		Totally agree		Somewhat agree		Somewhat disagree		Not at all in agreement		Totally opposed	
10		9	8	7	6	5	4	3	2	1	

	Score from 1 to 10
Beaches are part of our natural heritage and must be preserved for future generations	
I think it's useless to try to anticipate, it's better to let it happen and adapt as it goes along	
We can't relocate all the issues; it would be too expensive	
Relocation would create jobs in construction and public works	
I am willing to pay more taxes to finance the relocation policy	
I am willing to pay more taxes to protect the coastline	
It is pointless for me to support relocation if those who are also concerned do not do the same	

**TRUST IN INSTITUTIONS**

**Which are the top two criteria that justify your trust in one institution rather than another?**

	Priority choice N°1	Priority choice N°2
Technical skills		
Credibility and reliability		
Proximity to elected officials		
Transparency of choices		
Fairness of the measures		
Implementation of citizens' consultation		

**What do you think of the management measures carried out so far for coastal risks (groynes, breakwaters, recharging, etc.)?**

Totally agree		Totally agree		Somewhat agree		Somewhat disagree		Not at all in agreement		Totally opposed	
10		9	8	7	6	5	4	3	2	1	

	Score from 1 to 10
These measures are effective	
They are conducted in the collective interest	
The institutions that implement them are qualified	
They are consulted with the population	
Coastal risks are well integrated into urbanisation policies	
Governments tend to distort the facts to support the policies they design	
Public funding and solidarity for flood adaptation measures are right because it is necessary to show solidarity regarding these risks	

**Do you agree that the public authorities provide sufficient information to the population on the following topics?**

	Your score from 1 to 10
Alternative measures	
The costs	
The probability of risk	
The effectiveness of the measures	

**PERCEPTION OF CLIMATE CHANGE (NEP)**

**What do you think of the following sentences?**

	Totally agree	Somewhat agree	Somewhat disagree	Not at all in agreement	I don't know	No opinion
People are too worried about the future of the environment						
People are too worried about sea level rise						

	Totally agree	Somewhat agree	Somewhat disagree	Not at all in agreement	I don't know	No opinion
Human beings have the right to modify the natural environment according to their needs						
When humans try to change the course of nature it often produces disastrous consequences						
The so-called ecological crisis humankind is facing, has been greatly exaggerated						
Humans were created to rule the rest of nature						
If things continue at the current speed, we will soon be facing a major ecological disaster.						
The balance of nature is very weak and easily disturbed						

Have you already signed a pro-environment petition?  Yes  No

Do you turn off the light when leaving a room?  Yes  sometimes  No

Do you pay attention to water saving?  Yes  sometimes  No

**SOCIO-DEMOGRAPHIC PROFILE**

**Gender of respondent :**  Male  Female

**What is your year of birth?**

**Did you grow up in a coastal community? Yes/No**

Are you :

<input type="checkbox"/> Married, spouse, or living together under a civil partnership	<input type="checkbox"/> Single, Widowed or Divorced
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Are you?	<input type="checkbox"/> Owner	<input type="checkbox"/> Tenant
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How many years have you lived in this house or flat? \_\_\_\_\_

How many months per year do you live in this house or flat? \_\_\_\_\_

Do you have family or friends that you often see, living in the same area where you live? Yes/No

What is your occupational category?

<input type="checkbox"/> Farmer	<input type="checkbox"/> Worker
<input type="checkbox"/> Craftsman, trader, company director	<input type="checkbox"/> Unemployed
<input type="checkbox"/> Managers and high level executives	<input type="checkbox"/> Student/scholar
<input type="checkbox"/> Intermediate occupations	<input type="checkbox"/> Retired
<input type="checkbox"/> Employee	<input type="checkbox"/> Other: specify .....

What is your highest level of diploma? Tick the corresponding box

No	BEP-CAP	BAC	BAC +2	BAC + 3 or 4	BAC + 5 and more
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Are you member of an association in the commune?  Several  One  No

Do you belong to a neighbourhood association?  Yes  No

Do you donate to any associations or charities?  Yes  sometimes  No

Do you donate to the "Resto du Coeur"?  Yes  sometimes  No

Have you ever offered to give blood?  Yes  No

Is or was your professional activity related to:

<input type="checkbox"/> Tourism	<input type="checkbox"/> Risk management
<input type="checkbox"/> The sea	<input type="checkbox"/> Environment
<input type="checkbox"/> None of these areas	

What are the total monthly resources of your household (including family allowances, rent received, etc.)?

<input type="checkbox"/> <750	<input type="checkbox"/> 750 to 1.000 €	<input type="checkbox"/> 1,000 to €1,500	<input type="checkbox"/> 1,500 to €2,000
<input type="checkbox"/> 2,000 to €3,000	<input type="checkbox"/> 3,000 to €4,500	<input type="checkbox"/> > 4.500 €	

Did you vote during the last municipal elections?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
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Where do you stand politically on the following axis?

Left wing

Right wing

1       2       3       4       5       6       7       8       9       10  
 No opinion       Don't know

### Appendix B - Overall goodness-of-fit of econometric models

Indicator	Perception of relocation policies (i)	Acceptability of relocation policies(ii)
<b>Log Likelihood</b>		
<i>Log L</i>	451.82	167.42
<i>Log L<sub>0</sub></i>	530.44	289.11
<i>Pseudo-R<sup>2</sup></i>	0.1482	0.4209
<b>Likelihood Ratio Test</b>		
$\chi^2_{95\%}$	157.23	243.38
<i>p-value</i>	< 0.0001	< 0.0001
<b>Information criteria</b>		
<i>AIC</i>	939.65	378.84
<i>SC</i>	1023.19	481.38
<b>Proportion Predicted with Success</b>		
<i>Global</i>	67%	90%
<i>Positive (acceptable)</i>	62%	98%
<i>Negative (not acceptable)</i>	71%	39%