

Assessing the effects of citizen climate literacy and attitudes on their 'greening' behaviour in a climate change hotspot region of the Eastern Mediterranean

Journal: Climate

The 'Climate Literacy' Questionnaire

[Notes about the Questionnaire

We designed the original 'Climate Literacy' Questionnaire on a Google Form. Participants' anonymity was rigorously protected throughout the survey process. We collected only general socio-demographic information, and an introductory text assured respondents of the anonymity of their responses. The questions, translated in English, and their connection to the constructed variables are presented below, in an order that is not the same as in the original Questionnaire, to ensure a clear correspondence with the variables and items analyzed in the main text.]

Introductory text

[Note: The introductory text was placed on www.meteo.gr on the first page to redirect visitors to the Questionnaire. The aim was to attract the public's interest as much as possible, without expressions such as 'climate literacy' and 'testing your knowledge', which might discourage people from participating and completing the Questionnaire.]

'The climate change from your perspective

The expression '**climate change**' is in our everyday vocabulary. It is associated with extreme weather phenomena worldwide. The Questionnaire aims to capture your **opinions, concerns, and experiences** regarding climate change and its mitigation measures. Your participation, fully anonymous and confidential, will help us understand citizens' perspectives on the threat posed by climate change. There are no right or wrong opinions! We ask for the **spontaneous completion** of a **5-minute-long** Questionnaire. The results will be published on the website www.meteo.gr, as well as in scientific and popular articles. The study is conducted in the frame of an international research program.'

Main Questionnaire (constructed *variables* in italics; other information in bold)

self-evaluation (2 Likert-type questions (scale 1-5))

- How would you overall rate your knowledge of:
 1. Climate change.
 2. The impacts of climate change in the eastern Mediterranean, the wider geographical area of Greece.

climate literacy (12 Likert-type questions (scale 1-5), 6 concerning climate change issues at the global level and 6 at the regional level, i.e., the Eastern Mediterranean)

- With how much certainty would you say that the climate is affected by:
 1. The greenhouse effect
 2. The combustion of coal, oil and natural gas
 3. The concentration of carbon dioxide (CO₂) in the atmosphere
- With how much certainty would you say that:
 4. Climate change is responsible for extreme weather events
 5. Global warming is an indication of climate change
 6. Europe is the continent that is warming at a slower rate than the other continents (FPQ)
- With how much certainty would you say that in the Eastern Mediterranean, climate change is expected to cause:
 7. More days with very high temperatures
 8. Shorter periods of drought (FPQ)
 9. Extreme rainfall
 10. Forest fires of very high intensity and extent
 11. Significant sea level rise
 12. Decrease in sea surface temperature (FPQ)

climate policy literacy (4 dichotomous (no/yes) questions)

- Did you know that:
 1. The COP is the UN member states' annual climate conference, making critical decisions like the Paris Agreement.
 2. All countries of the European Union have already passed a National Climate Law for adaptation to climate change.

3. Climate neutrality is an objective of the European Union to stabilize greenhouse gas emissions in the atmosphere by 2050.
4. The 'carbon footprint' is the carbon dioxide (CO₂) emissions from human activities (such as burning fossil fuels for energy production and transport).

disbelief (4 Likert-type questions (scale 1-5))

- How much do you agree that:
 1. There is no climate change
 2. Climate change is mainly due to natural causes
 3. Concern about climate change is exaggerated
 4. Nature and people can easily adapt to higher temperatures

adaptation concern (3 Likert-type questions (scale 1-5))

- How much you fear that measures for climate change and associated impacts mitigation may:
 1. Burden the country's economy in the near future
 2. Bring a reduction in jobs in the country
 3. Harm the country's ecosystem

personal concern (3 Likert-type questions (scale 1-5))

- How much do you fear that in the near future:
 1. Climate change will have adverse effects on you and your relatives
 2. Climate change will cause severe financial losses for you and your relatives
 3. You may need to take radical measures to adapt to climate change (e.g. change of place of residence, occupation)

coping appraisal (2 Likert-type questions (scale 1-5))

- To what extent do you think that:
 1. You can adapt yourself to climate change without having a significant impact on your life
 2. You can respond to financial requirements for the adjustment to climate change

adverse experience (1 dichotomous (no/yes) question)

- Have you experienced extreme weather events that affected you, your family environment or your property?
 1. No [continue to the rest of the main Questionnaire]
 2. Yes [redirects to a section dedicated to adverse experience information]

Section about Adverse Experience if applicable ('yes' to the previous question)

Kind of phenomena (select up to 2 if they co-existed)

- What kind of phenomena:

- Flooding
- Strong winds
- Heatwave
- Forest fire
- Drought
- Landslides
- Snow/frost
- Other

extent (4 Likert-type questions, (scale 1-5))

- How much it affected:
 - Your financial situation
 - Your or a relative's physical health
 - Your or a relative's mental health
 - Making radical decisions, such as changing your place of residence or profession

trust in state (2 Likert-type questions, (scale 1-5))

- To what extent do you trust that in Greece, the state:
 1. Implements climate change mitigation policies
 2. Takes effective measures to adapt to climate change

trust in science (2 Likert-type questions, (scale 1-5))

- To what extent do you trust:

1. The scientific findings regarding the criticality and threat of climate change
2. The measures proposed by the scientific community to mitigate climate change and adapt to it

trust industry (2 Likert-type questions, (scale 1-5))

- To what extent do you trust that in Greece:

1. Polluting industries responsibly adopt measures to reduce greenhouse gas emissions
2. Polluting industries are transparent about their actions to reduce their environmental impact

greening level (number of the selected behaviours (scale 1-7))

- Which of the following do you regularly do?

1. I recycle & reuse
2. I drive less and use alternative means (public transport, bicycle, electric vehicles, etc.)
3. I limit consumption or adopt 'green' habits (reused clothes, furniture, or vintage items)
4. I limit energy consumption (heating, home lighting, switching off electrical appliances out of use)
5. I adopt 'green' practices in food consumption (reducing meat, eating local foods, etc.)
6. I make sure not to use water recklessly
7. I actively support local actions against climate change

willingness to pay (3 Likert-type questions (scale 1-5))

- To what extent are you willing to

1. Be financially burdened due to special environmental charges for energy consumption, plastic use, waste rejection, etc.
2. Insure privately your property for damage from weather phenomena
3. Adopt your property against climate change, e.g., installing renewable sources of energy, applying thermal insulation, reconstructing for flood protection

infos (number of sources (scale 0-4))

- What media do you mainly follow:
 1. Social media
 2. Mass media (newspapers, television, radio)
 3. Websites of environmental organizations (e.g. relevant NGOs)
 4. Webpages or podcasts with scientific content

Age (corresponding to generation)

- ☐ < 25
- ☐ 25-40
- ☐ 41-60
- ☐ 61-75
- ☐ > 75

gender

- ☐ Female
- ☐ Male
- ☐ Other
- ☐ I don't want to say

education

- ☐ Primary school
- ☐ Middle School/High School
- ☐ Post-secondary education
- ☐ University
- ☐ Postgraduate

professional sector

- ☐ Agriculture / Livestock / Fishing / Forestry
- ☐ Education
- ☐ Tourism
- ☐ Energy/Construction sectors
- ☐ Health sector
- ☐ Research/Technology/Innovation
- ☐ Other

Perfecture of residence (dropdown menu)

Urban (1 dichotomous question: city or not)