

climate-change-emotions.org



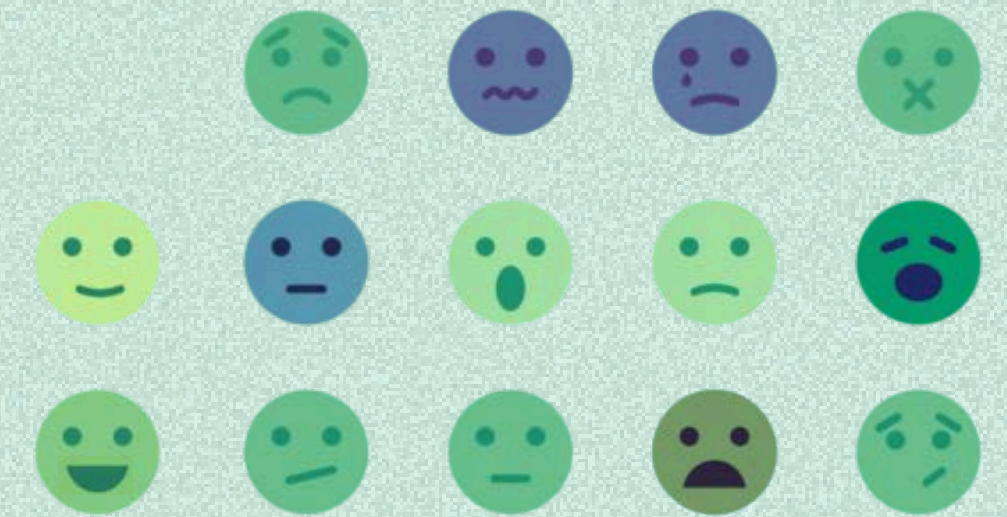
CLIMATE CHANGE EMOTIONS



So far, we conducted several studies in different European countries on the emotions experienced by people with regards to climate change. Thanks to the Science and Society Initiative, we want to share the most important results with the citizens.

Climate change is a timely topic - evoking strong and often extreme emotions. Until now, scientific studies showed that these emotions affect mental health and well-being. Many researchers assumed that the emotions can play a key role in motivating people to climate action, but it was not clear which emotions have the biggest efficacy and why.

This is where our international team of psychologists and neuroscientists stepped in, to shed light on these issues.



We conducted over 70 in-depth interviews in Poland and Norway with citizens deeply concerned about the planet's future. These interviews formed a basis for the first professional tool to study climate change emotions - the *Inventory of Climate Emotions (ICE)* - and a set of climate-change related stories which allow us to evoke emotions in experimental settings - the *Emotional Climate Change Stories (ECCS)* database. Using these tools, we could perform a series of studies on the effect of emotions on climate action, including pioneering research with the use of neuroimaging methods. For the first time, we showed what happens in human brains when people experience strong emotions related to climate change or make decisions related to climate action.

POPULAR SCIENCE OUTREACH

Do you know about climate anger or climate hope? So far, most discourse was focused on climate anxiety – a type of anxiety experienced when thinking about the impending climate catastrophe. As a part of our science outreach, we took action to **promote knowledge about climate emotions in public discourse in Poland** and increase the public awareness about their diversity and their impact on mental health.

We invite Polish-speakers to read popular science articles on this topic; clicking the titles will redirect to the texts.

- Nauka o Klimacie
- Nauka o Klimacie
- Euronews

Emocje wobec zmiany klimatu: co czujemy w obliczu kryzysu

Które emocje mogą wpływać na działania na rzecz klimatu? – relacja z badań

„Widząc usychające drzewa, ludzie odczuwają żalobę jak po stracie”. Emocje i zmiana klimatu



PODCASTS & RADIO

If you do not enjoy reading, you can listen about our research in the podcast „**A o tym PAN słyszał?**”, which was recorded together with the Polish Academy of Sciences. If you are more interested in practical questions, for example, how to cope with your own climate-related emotions, check our mini-series of the **Homo Science** programme, which we prepared together with the biggest Polish popular science blog, Crazy Nauka: the first about the Inventory of Climate Emotions, and the second one about the neuroimaging studies.

We share our knowledge using many outputs and formats, because **we are focused on delivering accessible and reliable information about climate change and climate emotions to everyone.**

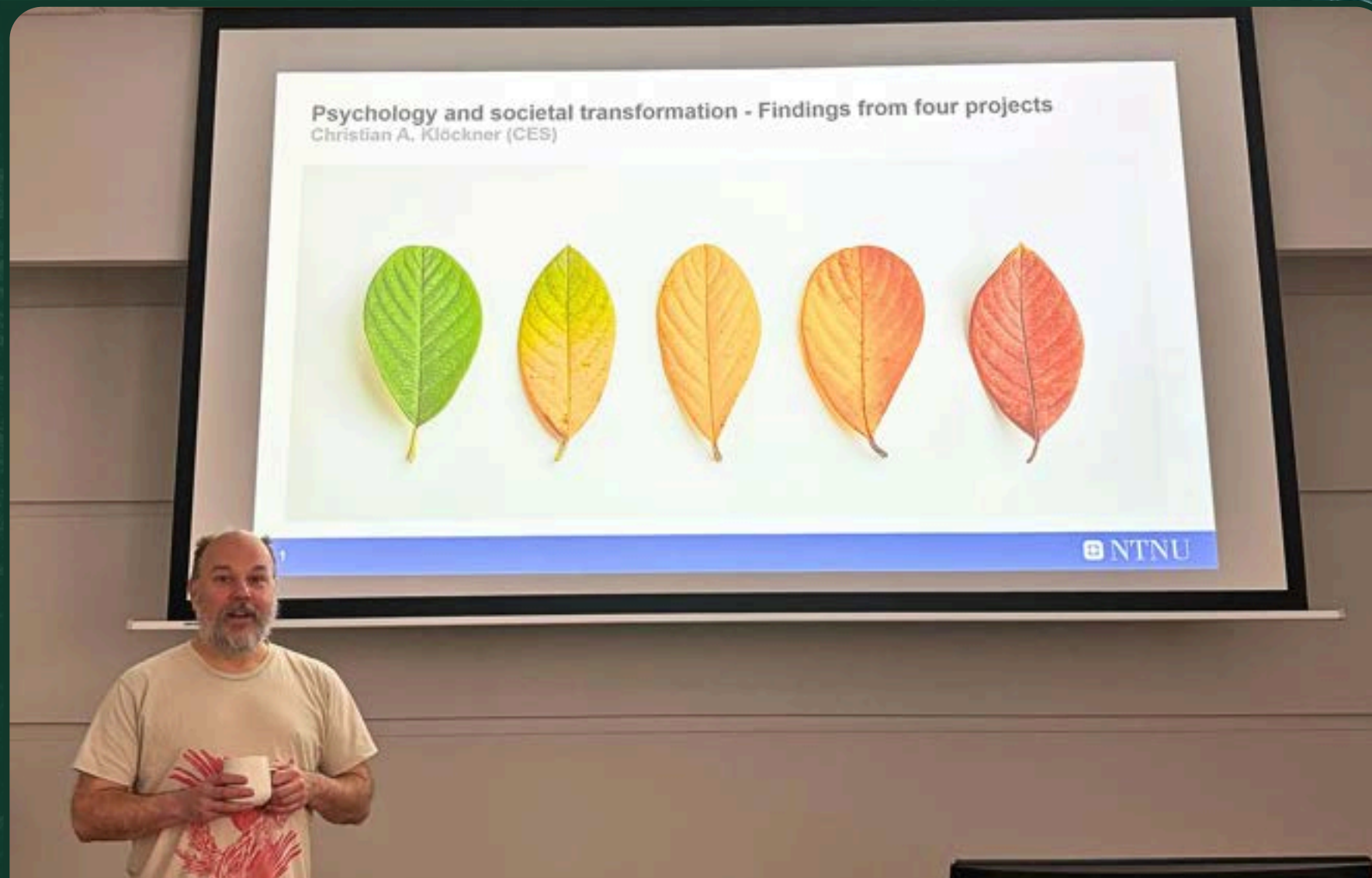
MOVIE ABOUT CLIMATE EMOTIONS

Would you prefer watching a movie? Together with Michał Kuryłek, we created a **10-minute spot**, in which we describe our methods and the results of our studies.



POPULAR SCIENCE LECTURES

As part of the project, Prof. Christian A. Klöckner (NTNU) visited Warsaw to give a lecture on climate-related emotions and pro-environmental behavior. Dominika Zaremba spoke at a meeting of the University of Warsaw Climate Change Students Union, discussing emotional responses to climate change, while Prof. Artur Marchewka presented the tools to measure climate emotions during a talk for NTNU faculty.



WORKSHOPS FOR PRACTITIONERS

We organized workshops for practitioners to raise awareness of **Climate Change Emotions in Poland** in Poznań and Warsaw. We trained 26 people (psychiatrists, psychologists, psychotherapists, educators, policy makers and NGO representatives). The workshops provided an overview of research findings, detailed recommendations for professional practice, and incorporated interactive learning activities such as group exercises, quizzes, and simulated psychological first-aid scenarios for individuals affected by climate emergencies. All participants received hand-out materials to support and use in their practice.

The feedback we received was enthusiastic and inspiring:

Thank you so much for the materials and the workshops, they were really interesting and valuable.

Extremely nice ambience, really important topic.

The workshop turned out to be fascinating. We spent intensive 4 hours on deepening the understanding of emotions people feel in the context of climate change. Thanks to the real examples and psychological case studies we could learn how to react and what happens in people's brains, in order to help people cope with the flurry of emotions.



WORKSHOPS FOR THE YOUTH

We conducted workshops for the youth, which combined reliable climate change education with training how to recognize and cope with one's emotions. Our goal was to create a safe space to talk about emotions such as climate anxiety, frustration, powerlessness, anger or hope.

The workshop was based on active work methods, such as discussions, creative exercises, working with emotion cards. Participants created short movies (reels), in which they recorded letters to themselves in the future.

Together, we created the "Tree of Possibilities" - a symbol of our joint strengths in the face of climate change.

The workshop concluded with a thinking exercise on the small but specific steps we can take in everyday life which can support the planet.



DEFINITION OF EMOTIONS ACCORDING TO *ICE*

Anger

Feeling angry, furious, irritated, and frustrated around the perception that people in power have not been doing enough to mitigate climate change or that they have been intentionally harming the climate.

Contempt

Feeling angry, frustrated and unhappy about the issue, climate change is a problem that has been blown out of proportion and has not been brought to the forefront of public attention.

Enthusiasm

Feeling positive emotions – joy, a sense of strength and purpose, inspiration and energy – from observing or participating in collective climate action.

Powerlessness

Feeling powerless and confused around the perception that one has little individual agency to fight climate change.

Guilt

Feeling remorse, guilty, and upset around the perception that one's behaviour negatively affects the climate. It applies both to activities that can be seen as "harmful to the environment" and to non-performance of activities that one feels should be performed to reduce one's impact on the climate. It may also refer to past behaviour that makes an individual feel guilty at present.

Isolation

Feeling lonely, and isolated around the perception that other people are not engaged in the topic of climate change as much as oneself.

Anxiety

Feelings of anxiety and fear resulting from the perception of climate change as a serious obstacle and threat to human life.

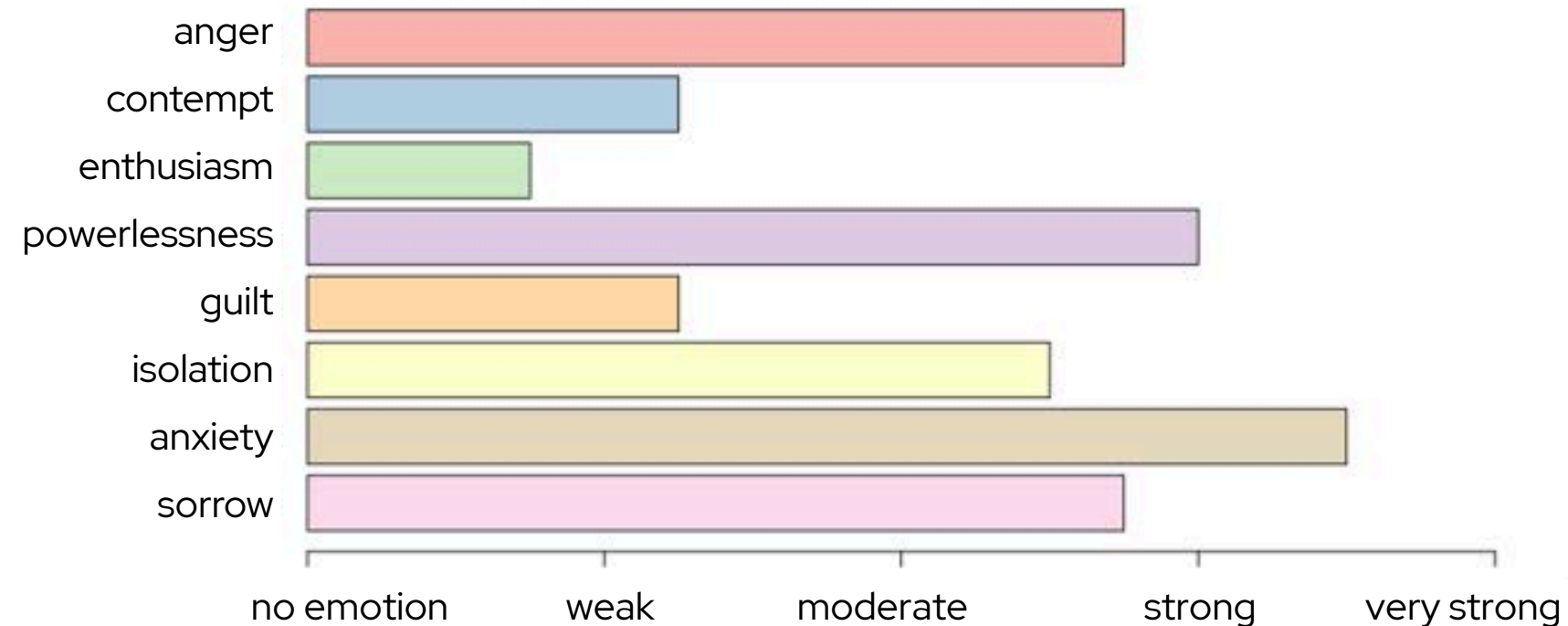
Sorrow

Feeling sad, sorry, and experiencing grief due to the perception that climate change is irretrievably changing the world and causing great losses to life on Earth.

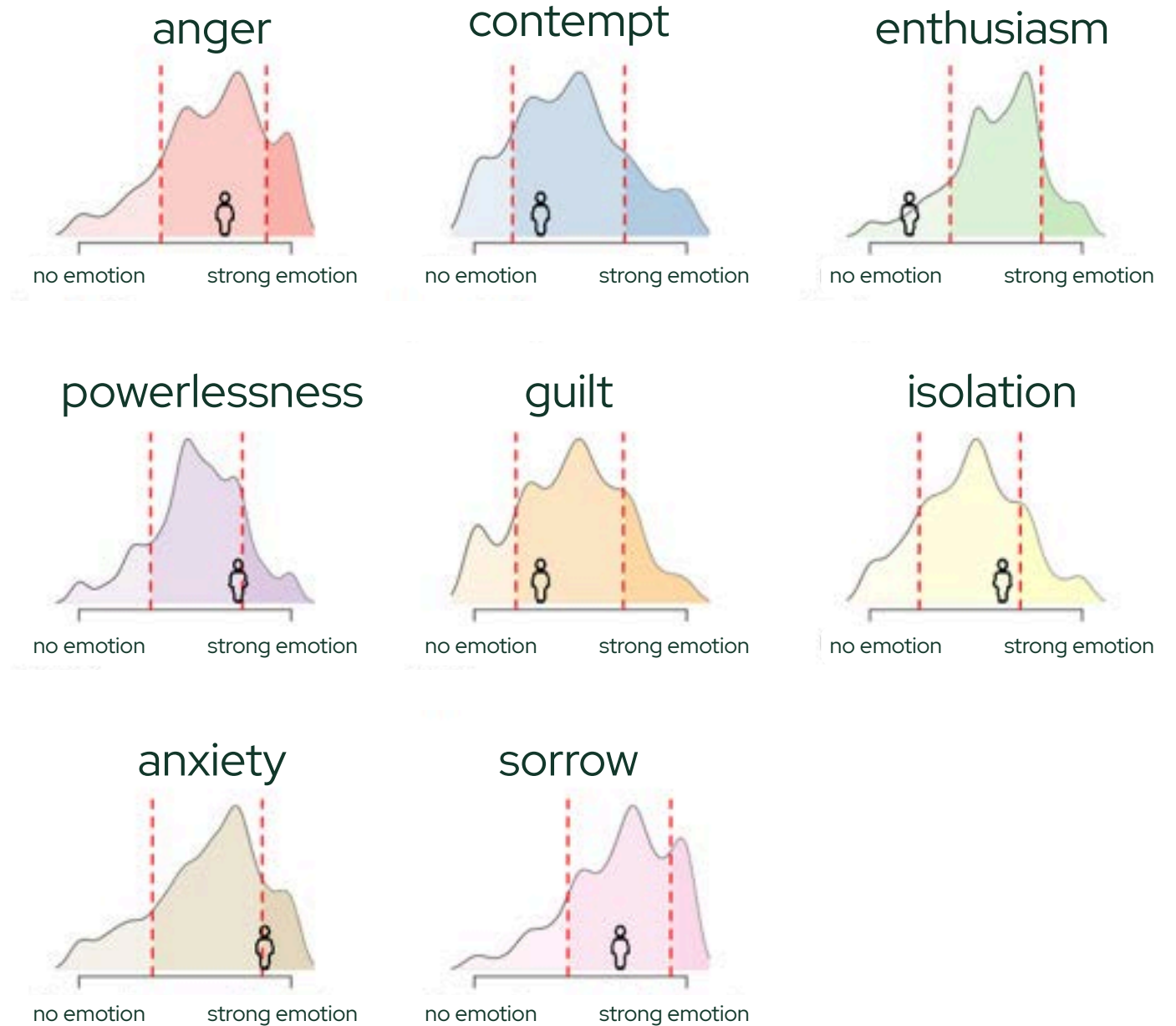
GET TO KNOW YOUR EMOTIONS

Do you think you're the only one who feels strong emotions about climate change? Or maybe you don't know what to call what you feel? We created a platform which allows you to complete the Inventory of Climate Emotions (ICE), so you can learn about your emotions concerning climate change.

Your emotions



You can also compare the emotions you feel with the answers given by other people.



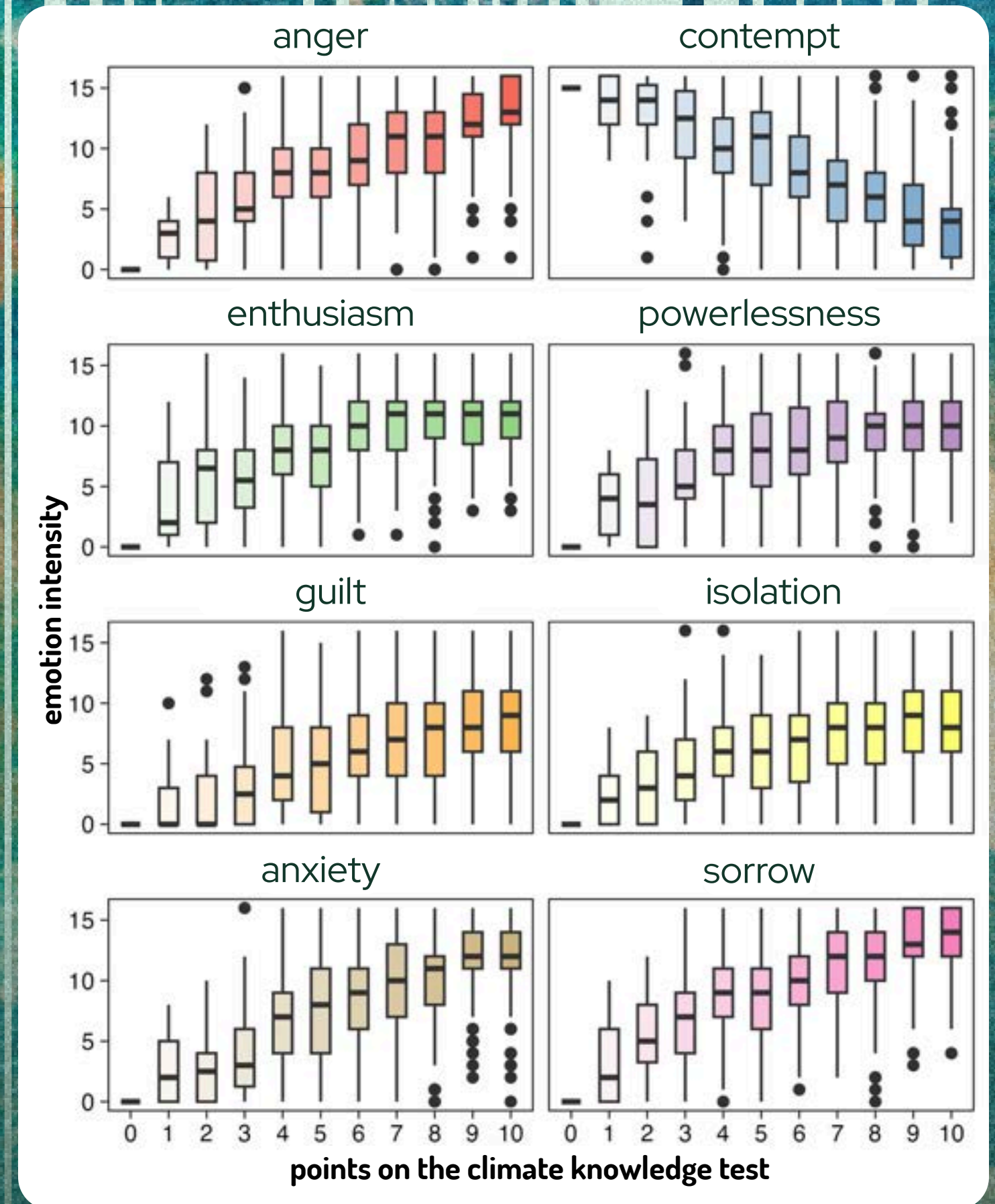
 [measure_your_emotions →](#)



PILOT STUDY

When completing ICE questionnaire, you can also opt to take part in a pilot study, in which we investigate the relationship between the knowledge about climate change, pro-ecological behavior, and experienced emotions. We ask Poles about climate change, its causes, consequences, and environmental issues related to it, such as the biodiversity loss or air and water pollution.

Based on 1200 answers we gathered so far we can see that reliable and solid knowledge about climate is, in general, associated with experiencing stronger emotions. There is one exception, though - the feeling of contempt is weaker in people who scored higher on the climate knowledge test.



OPEN DATA REPOSITORY

The research methods we created and the experimental data we gathered is now published in an open data repository on [OpenNeuro](#), and their detailed description in the [Scientific Data](#) journal.

In this way, we share these methods and data with other researchers, and we make sure our research is transparent and our results are easily verifiable.



scientific data

OPEN

DATA DESCRIPTOR

CLIMATE BRAIN - Questionnaires, Tasks and the Neuroimaging Dataset



Dominika Zaremba¹✉, Bartosz Kossowski¹, Marek Wypych¹, Katarzyna Jednoróg², Jarosław M. Michałowski³, Christian A. Klöckner⁴, Małgorzata Wierzbą¹✉ & Artur Marchewka¹✉

ABOUT US



prof. Artur Marchewka

Leader of the Initiative | Nencki Institute

Expert in the field of cognitive psychology and psychology of emotions research using methods of imaging the structure and functions of the human brain.



prof. Christian A. Klöckner

NTNU

Researcher of the psychological aspects of climate change, interested in their positive and negative impact on taking pro-ecological actions.



prof. Jarosław Michałowski

SWPS University

Studies ways of coping with climate change, in particular the mechanisms of the development and persistence of mental health problems associated with it.



Małgorzata Wierzba, PhD

Nencki Institute

Interested in the broadly understood development of psychological methods that would allow for a better understanding of the psychological aspects of climate change.



Dominika Zaremba, MSc

Nencki Institute

She is interested in using knowledge about emotions related to climate change to formulate better communication strategies and systemic actions.



Bartosz Kossowski, PhD

Nencki Institute

Technology and *green life* enthusiast. Responsible for MRI, IT infrastructure, and data management.

Warsztat okazał się fascynujący. Spędziliśmy intensywnie 4 godziny na zgłębianiu złożoności emocji jakie odczuwają ludzie w kontekście zmian klimatu. Dzięki realnym przykładom sytuacji i przypadków psychologicznych mogliśmy zobaczyć, jak należy reagować oraz co możemy zrobić dla drugiego człowieka, aby było łatwiej przejść mu przez te emocje.

Teraz już wiemy:

- 🌍 Jak rozmawiać z dziećmi i młodzieżą o klimacie?
- 🌍 Jak nie unieważniać ich emocji?
- 🌍 Jak wspierać młodzież w przezwyciężaniu poczucia bezsilności i zachęcać ich do działania?
- 🌍 Jak nie unikać trudnych pytań?

Dziękujemy Wam raz jeszcze 🥰🥰



- 18h Like Reply ❤️
- Magdalena Sztoś
- 18h Like Reply ❤️
- Lidia Super robota, gratulacje dla Was ❤️
- 2h Like Reply 3 ❤️👍
- Kamila mańszewska 🥰 super że są takie warsztaty
- 17h Like Reply ❤️

ponieważ jestem studentką specjalizacji social research. Jeśli mogłabym Ci się jakoś kiedyś przydać to daj znać :)
Jeszcze raz dzięki za super warsztaty!



Ja jestem pod olbrzymim wrażeniem wszystkiego w sumie, co tam

przy okazji mnie spotkało :)

I Nencki i Jarek, i Artur. Mega fajna atmosfera, bardzo ważny temat. A teraz kończę psych i rozglądam się za obszarami ciekawymi, za wzorami.

Na razie nie mam chyba konkretnych spraw, ale z przyjemnością będę wpadał na wszystkie warsztaty i tak ciekawe okoliczności! Na razie zbieram szczękę z ziemi po tym jak fajne to wszystko było i dzięki :))

Szyszki i paprocie - Anna
Meg Wlo o rety, ale super, już się zgłaszam na ten warsztat w takim razie

1d Like Reply 2 ❤️👍



Katarzyna Pruzińska is with Dominika Zaremba at Instytut Biologii Doświadczalnej im. M. Nenckiego PAN.
a day ago · Warsaw · 🌐

Z emocjami związanymi z kryzysem klimatycznym mierzymy się na co dzień i jest to bardzo szeroka skala i paleta odczuć - od znużenia, bezsilności, pogardy, smutku, lęku, aż po wściekłość.

Jak sobie z tym radzić, żeby znaleźć miejsce na nadzieję i współpracę?

Jak rozmawiać z dziećmi i młodzieżą, kiedy stoimy nad wyschniętym starorzeczem, w kilka miesięcy wcześniej podziwialiśmy bogactwo bezkręgowców, słuchaliśmy żab?

Jak znajdować motywację, skoro polisy na życie brak?

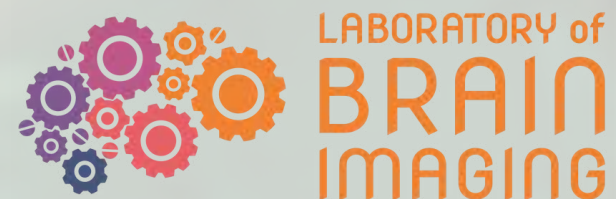
Dziękuję Dominika Zaremba, Instytut Biologii Doświadczalnej im. M. Nenckiego PAN - to był bardzo potrzebny warsztat.

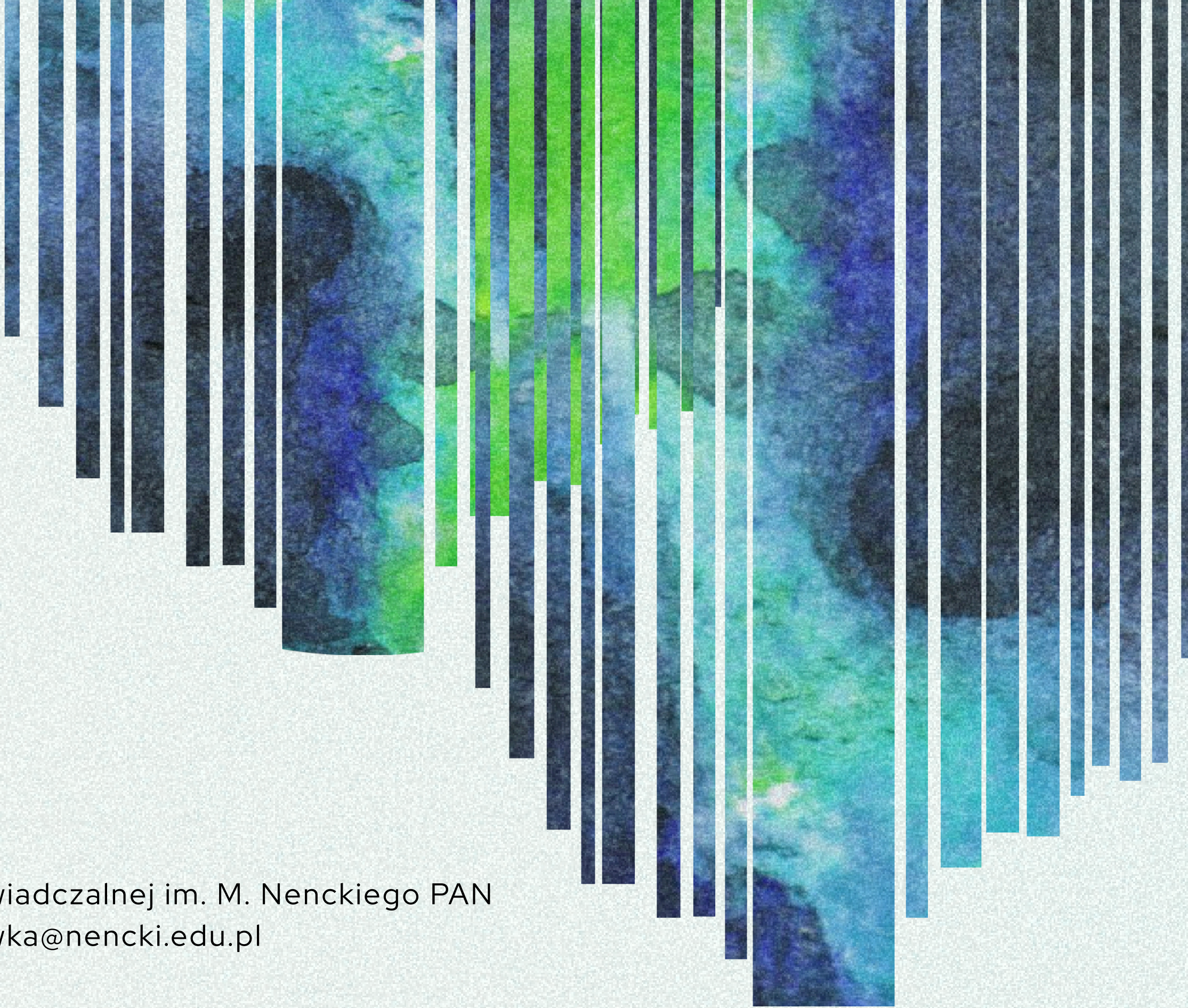




Norway
grants

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An abstract graphic design featuring a series of vertical bars of varying heights and widths, colored in shades of blue, green, and black. The bars are arranged in a staggered, overlapping fashion, creating a sense of depth and movement. The background is a light, textured grey.

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