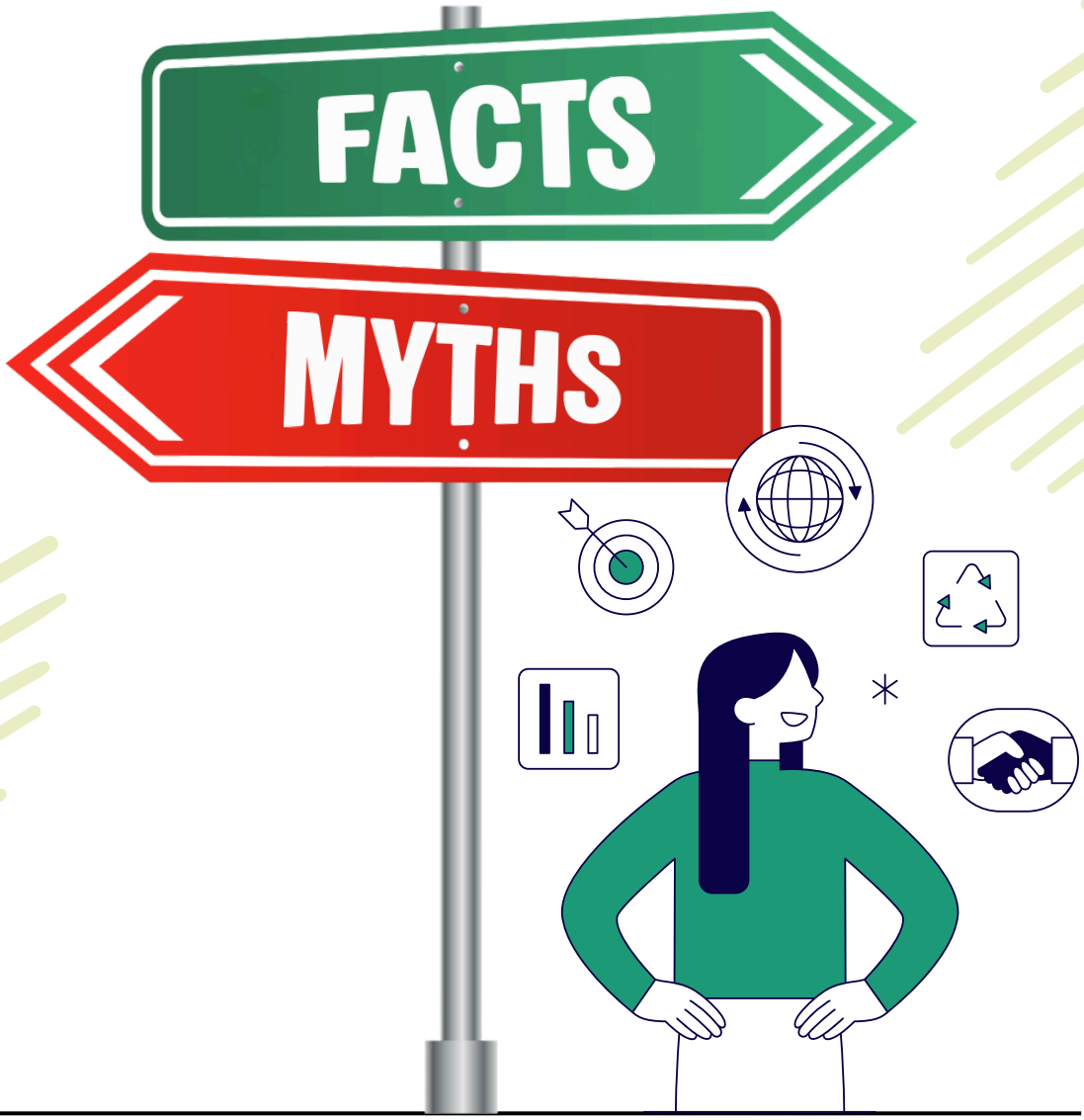
Fact-Checking Toolkit



Co-funded by
the European Union

Living Labs and Game-Based Learning to Checkmate Climate Misinformation

Erasmus+ Project: 2024-2-LV02-KA220-YOU-000266268

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ABOUT PROJECT

In today's digital world, climate misinformation spreads faster than ever, through social media, influencers, and even mainstream channels. Young people are bombarded with conflicting messages about climate change: from denial and greenwashing to misleading solutions and pseudoscience. This not only distorts public understanding but also weakens youth engagement in real, science-based climate action.

To address this growing challenge, we launched **Checkmate – Living Labs and Game-Based Learning to Checkmate Climate Misinformation**, funded by Erasmus+, the project empowers youth workers and young people with the skills, tools, and critical thinking needed to confidently identify and counter false climate narratives.

One of the key outcomes of the project is the Fact-Checking Toolkit - a practical, ready-to-use educational resource designed to help youth workers facilitate conversations about climate misinformation. The toolkit was created in response to a clear need: many youth educators feel unprepared to address disinformation in their daily work. They asked for content that is credible, interactive, and adaptable to different learning environments.

The Fact-Checking Toolkit offers:

- Fact-based explanations that debunk common climate myths
- Interactive exercises that foster critical media literacy
- Case studies and examples of misinformation in action
- Guidance on how to create safe spaces for dialogue and questioning

It is grounded in non-formal education principles, combining research-based content with experiential and gamified learning. The toolkit is not just about correcting facts, it's about equipping young people to analyze, question, and act. Whether used in a workshop, youth exchange, or community event, the Fact-Checking Toolkit helps transform confusion into clarity and passivity into action.

Through Checkmate, we aim to build a generation of informed, resilient, and proactive young citizens who don't just consume climate narratives, they critically engage with them and shape the conversation.

INTRODUCTION

Climate change is one of the most thoroughly documented and scientifically verified global challenges of our era. Yet, despite overwhelming consensus within the scientific community, public understanding is increasingly undermined by the spread of false, misleading, or distorted information. In particular, misinformation and disinformation about climate change have emerged as major barriers to informed decision-making and meaningful climate action.

Climate misinformation refers to false or inaccurate information shared without intent to deceive-often originating from misunderstandings, misinterpretations of data, or outdated knowledge. A typical example is the belief that an unusually cold winter disproves global warming. While the intention may not be harmful, the result still contributes to confusion, skepticism, and reduced trust in science.

Climate disinformation, in contrast, involves deliberately fabricated content designed to mislead or manipulate audiences for political, economic, or ideological gain. It is frequently disseminated by actors with vested interests, such as fossil fuel industries, who seek to protect their profits by sowing doubt about the validity of climate science. Tactics include cherry-picking data, promoting pseudoscience, and amplifying conspiracy theories.

These narratives, whether born of confusion or crafted with intent, can take several forms. They may outright deny climate change, delay necessary action by questioning feasibility or fairness, exaggerate the sustainability credentials of certain industries (greenwashing), or suggest conspiracies behind climate policies and scientific research. Each of these approaches erodes public trust and obstructs policy progress.

The online information ecosystem plays a central role in amplifying such narratives. Social media platforms, through algorithmic design, prioritize content that provokes emotional reactions, often at the expense of factual accuracy. This encourages the formation of "echo chambers," where people are repeatedly exposed to content that reinforces their existing beliefs, with little opportunity to engage with evidence-based counterpoints. Confirmation bias further deepens this divide, making it difficult for corrective information to take hold.

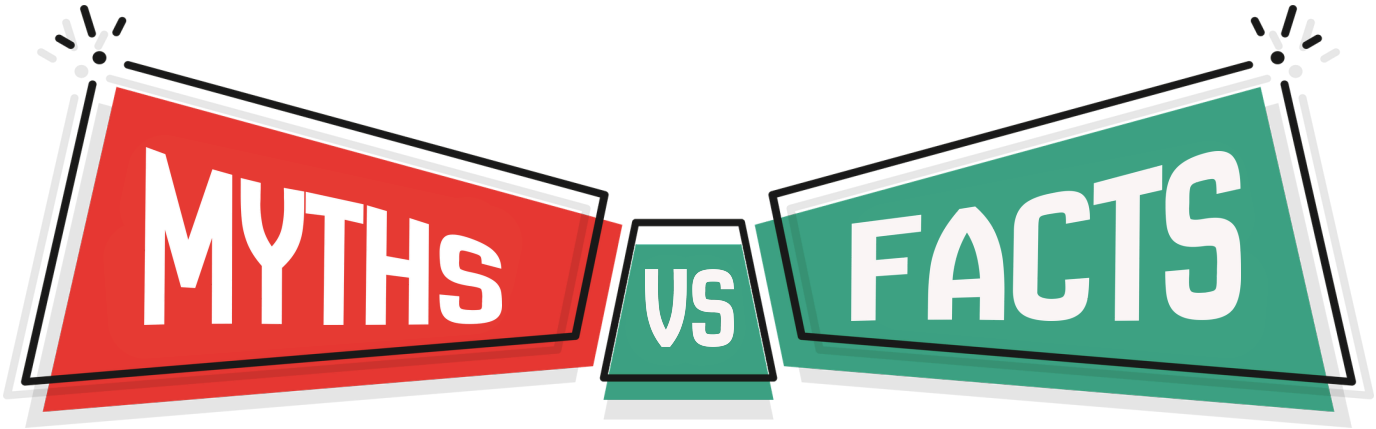
Malicious actors, ranging from coordinated disinformation networks to individual influencers, exploit these dynamics, targeting climate scientists, activists, and institutions. In some regions, particularly those already facing environmental and socio-economic stress, climate-related disinformation is weaponized to stir up social tensions and undermine local stability.

In this context, fact-checking has become not only a professional standard but a vital civic skill. It involves verifying sources, cross-checking claims with reliable data, consulting scientific consensus, and communicating findings clearly and responsibly. The Intergovernmental Panel on Climate Change, peer-reviewed journals, and accredited environmental organizations are among the most credible sources of climate-related information.

At the individual level, everyone can take steps to prevent the spread of false information:

- Evaluate the credibility of the source.
- Verify claims using multiple, independent references.
- Seek input from recognized experts in climate science.
- Share factual content using clear, inclusive language and cite sources visibly.

This Fact-Checking Toolkit was created to support educators, youth workers, community leaders, and engaged citizens in recognizing and responding to climate misinformation. It offers practical tools for verifying information, provides examples of common myths and their evidence-based rebuttals, and highlights how media literacy intersects with environmental responsibility.



Across Europe, the climate crisis is not only an environmental and economic challenge - it is also a communication challenge. Public understanding of climate change is often shaped not only by science, but also by social media, political discourse, and personal beliefs. In this complex information landscape, myths and misconceptions about climate change can easily take root and spread, whether through misinterpretation, outdated knowledge, or deliberate disinformation campaigns. These myths can distort the public conversation, weaken trust in scientific evidence, and hinder support for climate policies and solutions.

This section provides a carefully selected list of climate-related myths that are commonly encountered in Europe and beyond, each accompanied by factual explanations grounded in current scientific knowledge. The purpose of this compilation is to help readers recognize misleading claims, understand why they persist, and gain confidence in responding to them with clarity and evidence. Each myth is addressed not only through correction, but through context-explaining the origins of certain misconceptions and highlighting how they are often shaped or amplified through media, cultural narratives, or political rhetoric. The facts presented aim to promote critical thinking, encourage respectful dialogue, and empower individuals to take an active role in countering misinformation within their communities. Correcting these widespread falsehoods is essential for fostering an informed public, building societal resilience, and ensuring that climate action is supported by a shared understanding of the challenges and solutions ahead.



Extreme weather changes are not related to global warming.



Extreme weather events for example intense storms, widespread floods, drenching rains, year-long droughts, record-breaking heatwaves, wildfires, and hurricanes are becoming more frequent and severe. These trends are strongly linked to global warming. Scientists use a combination of climate models and land, air, sea, and space-based observations to research how extreme weather events change over time.

English

Latvian



Animals will adapt to climate change.



Animals have two options: move or adapt, some animals will adapt but not all. Changes in temperature and precipitation patterns have led to shifts in species distributions, with some native species declining and invasive species becoming more prevalent. Forests are experiencing stress due to increased pests and diseases, threatening biodiversity.

English English English



We can just move to other planets if Earth gets too hot.



There is no alternative to Earth. Moving to an other planet is not technically, financially, and logistically feasible at the scale needed to replace Earth. There is also no planet that offers the conditions needed to sustain life as Earth does. Earth is our only viable home and to ensure our long-term survival we must protect it.

English English English



Renewable energy is too expensive and unreliable for Latvia.



Latvia is one of the leaders in renewable energy within the EU. In 2023, renewables accounted for 43.5% of the country's energy consumption, placing Latvia among the top three EU countries in renewable energy use. Investments in wind and solar energy have surged, with solar and wind power production increasing by 92% compared to 2022.

English English English



Global warming affects only the surface temperature.



It is a known fact that the surface temperature of the ocean has warmed. But in 1992 it became possible to measure changes in the whole water column (from top to bottom), since then the temperature has raised drastically both in the depths as well as the surface. Though most of the added energy is stored at surface level (0-700°C). The last decade has not only been the warmest regarding weather, but the ocean as well (since the 1800s).

English English English



Cold winters prove that global warming is a hoax.



Global warming refers to long-term trends in average temperatures. Earth's temperature has risen on average by 0.06°C per decade for the last 60 years. The rate of warming tripled after 1980s (0.2°C per decade). The 10 warmest years since global records began in 1850 all have occurred in the last decade (2015-2024), with 2024 being the warmest year recorded ever.

English English English



The climate has always changed, this is nothing new.



While natural climate variations have occurred over millennia, the current rapid warming observed is unprecedented and primarily driven by human activities, such as the burning of fossil fuels. This has led to significant environmental changes, including rising global temperatures, melting ice sheets, sea-level rise, more frequent extreme weather events, and disruptions to ecosystems worldwide.

English

English



Climate models are unreliable, we can't forecast weather two weeks ahead.



Weather and climate are related but distinct concepts. Weather refers to short-term atmospheric conditions, while climate describes long-term weather patterns over extended periods (30 years or more). Daily weather forecasts can be uncertain beyond a few days, it can snow or rain one day, but be sunny the next. Climate models are based on well-understood physical principles and large-scale patterns, for example different climate zones have different weather patterns.

English English English



Austria's advanced waste management system means we don't need to worry about its climate impact.



Even though Austria has great waste management (high recycling and low landfill rates) that reduces emissions from the waste sector, it does not eliminate climate impacts. Waste incineration still produces CO2, and the production and consumption that lead to waste are major sources of emissions. Reducing waste at the source is crucial for cutting Austria's climate footprint.

English English English



It rains more, so global warming can't be happening.



An increase in rainfall, particularly in the form of heavy precipitation events, is consistent with global warming. Warmer air holds more moisture, leading to more intense rainfall. In Austria, studies have shown that heavy rainfall events have become more frequent and intense over the past decades, increasing the risk of flooding.

English English English



Global temperature records are unreliable as measurement stations near urban areas can absorb heat, distorting readings.



While urban areas can be warmer due to buildings and pavement, global temperature trends are confirmed across rural areas, oceans, and forests as well. Scientists use multiple tools, including ground stations, satellites, and natural indicators like tree rings and ice cores, all showing the same clear pattern: Earth is warming, everywhere.

English

English



Climate change is a conspiracy theory.



The majority of climate scientists agree that human activities are driving changes in the global climate, with harmful effects on both the environment and human societies. Research shows that people who deny climate change often do so partly because of conspiratorial beliefs. As a result, they are generally less inclined to engage in political efforts or take personal actions to reduce their carbon emissions.

English English English



Wildfires in Greece are primarily caused by arson or migrants.



While arson can contribute to wildfires, the increasing frequency and intensity of fires in Greece are largely driven by climate change factors such as prolonged heatwaves, droughts, and strong winds. Attributing these fires predominantly to arson or migrants is a form of misinformation that detracts from addressing the underlying environmental issues.

English English Greek



Carbon offsetting through tree planting is enough to cancel out emissions.



Tree planting can help absorb carbon, but offsets are often overestimated or ineffective due to issues like poor maintenance, forest fires, or land mismanagement. Real emission reductions must come from cutting fossil fuel use, not relying solely on offsets.

English

English



China is mostly responsible for climate change

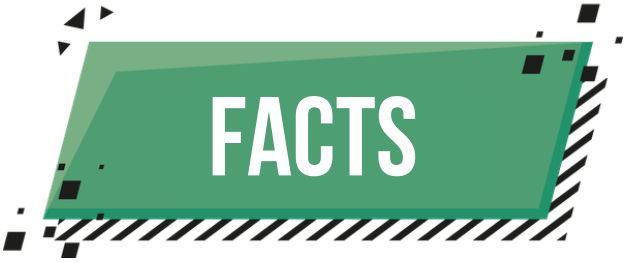


The myth blames China alone for climate change due to its large emissions today.. WWF clarifies that historical emissions from Western countries and global supply chains complicate responsibility; China's per capita emissions are lower than some Western countries, and it is investing heavily in renewables

English



Wind Turbines bring only harm to the environment and biodiversity ecosystem, especially birds



Wind turbines do cause bird deaths, especially among certain vulnerable species and when wind farms are poorly sited. However, when turbines are carefully located away from sensitive habitats and migration routes, the overall impact on bird populations is low. Scientific reviews and EU guidance confirm that proper planning and siting greatly reduce risks to birds

English English English



A couple of degrees of warming is not that big of a deal



Even a small increase in global temperature from 1.5°C to 2°C above pre-industrial levels greatly worsens climate impacts. At 2°C, more people face severe heatwaves, coral reefs suffer near-total loss, droughts intensify, and sea levels rise higher. For example, ice-free Arctic summers could occur every 10 years at 2°C, versus once per century at 1.5°C. This half-degree difference means millions more people and ecosystems are at risk.

English English English



Climate Change Will Cause a Massive Surge of Migrants to Europe



Scientific evidence shows that climate change drives mostly internal or regional migration, not mass movement to Europe. Long-distance migration requires resources and legal channels that many vulnerable people lack. Most climate migrants stay within their countries or nearby. Europe also faces its own climate displacement. The idea of a mass exodus to Europe is exaggerated and often used to spread fear, not inform policy.

English English English



Electric cars are not a better option because they are more expensive



Although electric cars may seem more expensive to buy, subsidies and falling prices are narrowing the gap. In the long term, they can be more advantageous due to lower maintenance and charging costs, which lead to significant savings compared to combustion vehicles.

English

Romanian



CO2 is harmless - it's natural, since plants need it



CO2 is natural, but too much traps heat in the atmosphere. Human emissions have raised CO2 levels by over 40% since pre-industrial times, disrupting the Earth's energy balance.

English Romanian French



Textiles don't contribute to climate change because they are biodegradable



The textile sector was the third largest source of water degradation and land use in 2020. In that year, it took on average nine cubic metres of water, 400 m² of land and 391 kg of raw materials to provide clothes and shoes for each EU citizen. Globally, the textile industry accounts for about 8-10% of climate impacting emissions and is known for significant chemical pollution and water usage, along with poor labour rights.

English

Romanian



Sea levels aren't rising because the polar ice is melting



Both Arctic sea ice and glaciers around the world are shrinking rapidly. Satellite data confirms long-term ice loss, contributing to sea-level rise.. Global sea levels have risen by over 20 cm since 1900, mostly due to melting glaciers and thermal expansion of seawater.

English Romanian French



Climate action will hurt the economy



Investing in climate solutions (like renewable energy and green jobs) boosts innovation, creates employment, and reduces costs related to climate disasters and health impacts from pollution.

English Romanian French



There is no scientific consensus on climate change.



Over 97% of climate scientists agree: climate change is happening, and it's primarily caused by human activities.

English Romanian French



Food waste isn’t a big climate problem



Food waste is a huge climate issue. Roughly 8–10% of global greenhouse gas emissions are linked to food that's produced but never eaten. When food rots in landfills (instead of being composted), it generates methane, a gas more than 25 times more potent than CO_2 over 100 years.

English

English



Composting releases harmful gases like landfilling does, so it's not much better.



Proper composting is aerobic (oxygen-based) and produces minimal methane. In contrast, landfilling is anaerobic (no oxygen), producing large amounts of methane. Composting not only cuts methane emissions dramatically, but it also returns valuable nutrients to the soil, improving carbon sequestration.

English



Going local with food always means a much smaller carbon footprint.



Not always. Transport emissions (food miles) can matter, but production methods usually have a bigger climate impact. For example, a local tomato grown in a heated greenhouse might have a much higher footprint than an imported seasonal tomato grown outdoors. So "local" isn't automatically lower-carbon - how food is produced matters most.

English

English



Plant-based foods have no environmental downsides.



Shifting to plant-based diets usually dramatically lowers emissions, but not all plant-based foods are created equal. Some crops (like almonds or avocados) can be water-intensive or tied to deforestation and biodiversity loss. A sustainable plant-based diet focuses on diverse, seasonal, and minimally processed foods.

English



Compostable packaging solves the problem of waste.



Many so-called "compostable" packages require industrial composting facilities to break down properly. In regular landfills or backyard compost piles, they can act like regular plastic. Worse, people often contaminate recycling and compost streams by mixing in "compostable" plastics, undermining waste systems.

English



Meat from small farms or backyard animals has little to no climate impact.



Small-scale or backyard farming may offer benefits like better animal welfare, but all ruminants (like cows and goats) emit methane through digestion. These systems can produce more emissions per kilogram of meat or milk due to lower efficiency. Some may have a smaller overall footprint if they use food waste or regenerative practices. Still, methane emissions remain a major climate concern regardless of scale.

English English English

HOW TO USE FACT CHECKING TOOLS

Fact-checking is a process of verifying information using reliable, science-based and trusted sources. The websites listed in this Toolkit provide access to reviewed articles, expert analysis, institutional data, and evidence-based explanations related to climate change and environmental topics.

These sources can be used by youth workers and young people to:

- Check whether a claim is supported by scientific evidence
- Find verified explanations of common climate myths
- Compare information across multiple trusted platforms
- Better understand the context behind climate-related news and social media content

Suggested approach for use in youth work:

1. Select a claim or myth
2. Choose a statement encountered online, in the media, or during group discussions.
3. Search for the topic in trusted sources
4. Use the websites listed in this Toolkit to find relevant articles, reports, or fact-checks related to the claim.
5. Compare information
6. Look for consistency across different sources and identify shared conclusions or evidence.
7. Check relevance and context
8. Pay attention to publication dates, sources cited, and how information is presented.
9. Discuss findings together
10. Encourage participants to explain what they found and reflect on how verified information can change their understanding of the topic.

These steps help transform young people from passive information consumers into active, critical thinkers. By practising fact-checking together, participants develop media literacy skills, learn to ask the right questions, and gain confidence in discussing complex climate topics. Regular use of trusted sources encourages young people to recognise credible information, challenge misleading or oversimplified narratives, and make thoughtful, informed decisions when encountering climate-related content both online and in everyday conversations.

FACT CHECKING TOOLS

TITLE	WEBSITE	DESCRIPTION	LANGUAGE
Verified	https://shareverified.com/topics/climate/	A website that provides fact-checked, science-based information on climate change and related issues.	English
iVerify	https://www.undp.org/digital/iverify	A fact-checking tool implemented by national counterparts to verify information flagged by the general public.	English/ Baltic
BECID Fact-Checking Repository	https://becid.eu/fact-checking/	A centralized hub for fact-checks produced by BECID, featuring searchable fact-check articles by independent experts and media outlets across Estonia, Latvia, and Lithuania.	Latvian/ English
Re: Baltica (Re: Check)	https://rebaltica.lv/recheck/	Re:Check is the fact-checking lab of Re:Baltica, verifying public claims, debunking viral falsehoods, and tracking disinformation in Latvia and the Baltics.	English
Media Bias/Fact Check	https://mediabiasfactcheck.com	Describes the bias and credibility of different media sources.	English
Reuters	https://www.reuters.com/sustainability/climate-energy/	This website provides reliable, fact-checked news and analysis on climate, energy, and sustainability issues worldwide.	English

FACT CHECKING TOOLS

TITLE	WEBSITE	DESCRIPTION	LANGUAGE
Climate-ADAPT	https://climate-adapt.eea.europa.eu/en/countries-regions/countries	An initiative of the European Environment Agency that provides data, tools, and case studies to support climate change adaptation across Europe.	English
eMonitor+	https://www.undp.org/arab-states/emonitor	A digital tool by UNDP using AI to detect, track, and counter disinformation, promoting information integrity in the public space.	English
Full Fact	https://fullfact.org/environment/	Fact checks, commentary and analysis about the environment, climate change, renewable energy and animal welfare.	English
Climate Fact Checks	https://climatefactchecks.org	This platform counters climate misinformation by highlighting inaccuracies in media, activist, and political claims about climate change.	English
Mimikama	https://www.mimikama.org/category/mimikama-faktenchecks/faktencheck/	Fact-checking platform focused on debunking misinformation, hoaxes, and fake news, especially related to social media and internet scams.	German/ English
Carbon Brief	https://www.carbonbrief.org/in-focus/factchecks/	Provides detailed fact-checks on climate science, energy policy, and environmental news to clarify misinformation.	English

FACT CHECKING TOOLS

TITLE	WEBSITE	DESCRIPTION	LANGUAGE
Ellinika Hoaxes	ellinikahoaxes.gr	The leading Greek fact-checking platform, Ellinika Hoaxes addresses a wide range of misinformation, including environmental and climate-related falsehoods.	Greek
Check4Facts.gr	check4facts.gr	Operated by the National Centre for Social Research (EKKE), Check4Facts.gr verifies claims related to climate change, health, and other societal issues.	Greek
AFP Fact Check (Greece)	https://factcheckgreek.afp.com/	Agence France-Presse's fact-checking division publishes articles in Greek, addressing misinformation on various topics, like climate change.	Greek/English
Climate Feedback	https://science.feedback.org/climate-feedback/	An international network of climate scientists who review and annotate media articles on climate change.	English
FactChecker.gr	FactChecker.gr	Independent Greek platform that investigates and verifies claims circulating on social media and news outlets. Member of EDMO; active in combating disinformation.	Greek
FactReview.gr	https://factreview.gr/category/pseudoscience/climate-change/	Greek platform specializing in debunking pseudoscientific and climate-related misinformation. Offers educational material and scientific reviews.	Greek

FACT CHECKING TOOLS

TITLE	WEBSITE	DESCRIPTION	LANGUAGE
Earth School / TED	https://ed.ted.com/earth-school	Lessons on climate and sustainability to help students understand nature and how to protect it.	English
Educator Resources / Earth Rangers	https://www.earthrangers.com/EN/CA/educator-resources/	Free tools for teachers: lesson ideas, eco-club content, podcasts, and more.	English
Ténykérdés	https://tenykerdes.afp.com/	Trusted source for checking climate facts and fighting misinformation.	Hungarian
Lakmusz	https://lakmusz.hu/	Tools to spot climate myths and promote informed online behaviour.	Hungarian
Yale Program on Climate Change Communication	https://climatecommunication.yale.edu/	Research and resources to help schools and communities talk about climate solutions.	English
NASA For Educators	https://climate.nasa.gov/for-educators/	NASA's climate education hub — from "Climate Kids" to classroom-ready materials.	English

FACT CHECKING TOOLS

TITLE	WEBSITE	DESCRIPTION	LANGUAGE
Factual.ro	https://www.factual.ro/schimbari-climatice/	An independent fact-checking platform that debunks climate misinformation	English Romanian
Google Fact Check Explorer	https://toolbox.google.com/factcheck/explorer	A tool for searching verified, fact-checked information on climate change and other topics.	All languages
BRODhub	https://brodhub.eu/en/fact-checking	Part of EDMO, this hub offers fact-checks in Bulgarian and Romanian to fight climate misinformation with AFP and Factual.	English Romanian Bulgarian
Skeptical Science	https://skepticalscience.com/	Debunks climate misinformation using peer-reviewed research and clear explanations to clarify the scientific consensus and refute common myths.	29 languages
Euro Climate Check	https://euroclimatecheck.com/	A European initiative uniting experts to combat climate misinformation with tools and accurate information.	English
AFP Verificat Romania	https://verificat.afp.com/list/Climat	AFP Verificat's "Climat" section debunks false climate claims in Romanian, aiding public understanding and fighting misinformation.	26 languages

MYTH-BUSTING WORKSHOP PLAN

TARGET GROUP: Young people aged 15–25
RECOMMENDED GROUP SIZE: 10–25 participants
DURATION: 40–120 minutes (depending on activities chosen)
METHODOLOGY: Non-formal education, interactive discussion, media literacy tools, gamified learning

LEARNING OBJECTIVES:
By the end of the session, participants will:

1. Understand the difference between climate misinformation and disinformation.
2. Identify common climate myths and explain why they are misleading.
3. Use fact-checking tools to verify information.
4. Engage in peer learning through gamified activities (e.g., Kahoot).
5. Reflect on how misinformation shapes public opinion and climate action.

OPENING THE CONVERSATION WITH CURIOSITY
When tackling climate misinformation, it's important to create an open and curious learning space - not a debate. Here are a few gentle strategies:

- Start with curiosity, not correction.

Ask: "Have you ever heard this before?" or "Why do you think people believe this?"

- Avoid shame or blame.

Young people might have repeated myths unknowingly. Focus on learning, not being "right."

- Highlight empowerment.

Emphasize that everyone can be a climate detective. Spotting false info is a skill - and they're learning it.

- Use relatable examples.

Connect myths to everyday experiences or social media trends they've seen.

- Celebrate discovery.

Treat each busted myth as a win - for knowledge, for critical thinking, and for the planet.

CHOOSE AN INTRODUCTION / ICEBREAKER (15 MIN)

CLIMATE WORD CLOUD

- Quick round: each participant shares one word that comes to mind when they hear climate change.
- Facilitator writes words on flipchart/board to create a collective "word cloud."
- Brief reflection: notice patterns, emotions, or contrasts in the group's perceptions.

CLIMATE SPECTRUM

- Place a line across the room (e.g., agree ↔ disagree).
- Read short prompts like "Climate change feels overwhelming" or "Individual actions matter."
- Participants position themselves on the line.
- Short reflection on group diversity of views.

CLIMATE CONNECTIONS

- Read out a list of light prompts one by one, e.g.:
- "I used public transport this week."
- "I've tried a plant-based meal recently."
- "I recycle regularly."
- Participants raise their hand (or use the "raise hand" button) if it applies to them.
- Pause briefly to notice similarities and differences across the group.
- Wrap up: "We all connect to climate action in different ways — and together, we cover a wide range of experiences."

CLIMATE EMOJI CHECK-IN (*ONLINE VERSION*)

- Ask: "How do you feel about climate change today?"
- Participants respond in the chat or reaction bar using emojis only.
- Display emojis on-screen (e.g., collect in a shared doc or slide).
- Brief reflection: notice common moods, surprising contrasts, and what this tells us about the group's starting point.

CHOOSE ACTIVITY

GROUP WORK: MYTH-BUSTING LAB (30 MIN)

- Divide into small groups.
- Assign each group 1–2 climate myths from the Toolkit.
- Ask them to analyze:
  - What is the myth and why is it misleading?
  - What is the correct fact and where is it sourced from?
  - Where might young people see this myth (social media, YouTube, etc.)?

Output: Each group presents their myth-busting findings.

CLIMATE MYTH BUSTING CHALLANGE (30 MIN)

- Play the Kahoot quiz or print out quizz (available in toolkit's attachments)
- Debrief unclear questions.

OPINION CORNERS / DEBATE GAME (30 MIN)

- Read one topic aloud.
- Ask participants to move to a corner of the room:
- "Agree" / "Disagree" / "Not Sure"
- Let a few volunteers explain their choice.
- Reveal the fact using the Toolkit.
- Repeat with 2–3 different topics to warm up critical thinking.

GROUP DISCUSSION CIRCLES(30-40 MIN)

- Divide participants into groups (3–5 people).
- Give each group one topic slip *(available in toolkit's attachments)*
- Ask them to discuss the topic using the questions on the slip and relate it to what they know or have seen online.
- End with a short 1–2 min group summary back to the full group.

MINI PRESENTATION (45-60 MIN)

- Assign or let groups choose one topic.
- Give them 20–25 minutes to prepare a short 5 min presentation
- They should explain the myth, present the facts, and suggest how to respond or debunk it.

Optional: Use visuals, role-play, or storytelling to present.

CHOOSE A REFLECTION (10–15 MIN)

MYTH THAT SURPRISED ME MOST

- Go around the circle or use sticky notes.
- Prompt: "What myth or fact challenged your thinking today?"
- Helps participants acknowledge shifts in perspective and curiosity.

1 THING I'LL SHARE WITH SOMEONE

- Ask: "What's one myth-busting fact you'll share with a friend or family member?"
- Builds confidence to speak up outside the session and spread awareness.

PERSONAL PLEDGE

- Hand out a sticky note or small card:
- Prompt: "Write one small thing you'll do differently after today — online or offline."
- Stick on a "Climate Action Wall" or take home as a reminder.

WORDS SUMMARY

- Ask each participant to write down or say three words that describe today's experience.
- Combine them into a "group reflection word cloud" or mural.
- Helps capture emotional tone and collective learning.

FACT VS FEELING

- Ask participants to reflect on one fact they learned and one feeling they had.
- Prompt: "What did you learn, and how did it make you feel?"
- Connects head and heart — supports deeper engagement.

PASS THE GLOBE

- Use a small soft globe, ball, or object.
- Ask: "What's one message about climate you'd want everyone in the world to hear?"
- Each participant shares their message when the globe is passed to them.
- Encourages a sense of global responsibility and empowers young people to think about their voice in a wider context.

CONCLUSIONS

The Checkmate Fact-Checking Toolkit was designed to empower youth workers and young individuals with the knowledge and resources necessary to identify, challenge, and combat climate-related misinformation. In a world overwhelmed by conflicting messages and sensational headlines, the ability to think critically, verify information, and engage in open discussions has become vital.

This toolkit does not aim to shame those who subscribe to climate myths; rather, it focuses on empowering youth to become informed, active participants in the climate dialogue. Through myth-busting workshops, digital quizzes, and everyday discussions, youth workers now have practical and adaptable strategies to make this topic engaging, accessible, and relevant.

Combating climate disinformation is not solely about facts. It's about trust, dialogue, and action. Building a community of trust and dialogue is essential for fostering meaningful action against climate misinformation. The Checkmate Fact-Checking Toolkit invites users to create an environment where young people feel empowered to question, learn, and grow together. By emphasizing collaboration and shared experiences, the toolkit helps to bridge gaps in understanding and encourages a collective commitment to truth. We encourage youth workers to experiment, adapt, and extend these tools within their communities and to share their learning journey with the young people they engage with.

In addition to the resources provided, Checkmate encourages participants to become leaders within their own circles, inspiring peers to explore the complexities of climate science and its impact on our world. This peer-led approach not only amplifies the reach of the toolkit but also instills a sense of ownership and responsibility among young advocates.

CHECKMATE - Climate Myth Busting Challange Quiz

1) Which of the following is a result of global warming?

A) Fewer hurricanes
B) Milder weather patterns
C) Year-long droughts
D) Decrease in heatwaves

2) What are the two main options animals have in response to climate change?

A) Hibernate or evolve
B) Move or adapt
C) Fight or flee
D) Multiply or migrate

3) Why can't we simply move to another planet?

A) There are too many aliens
B) It's not technically feasible
C) Earth will fix itself
D) Mars already has life support systems

4) What is a benefit of renewable energy?

A) Unlimited supply
B) Causes air pollution
C) Non-recyclable
D) Always needs coal backup

5) Most of the heat from global warming ends up in the .....

A) Clouds
B) Ocean
C) Forests
D) Mountains

6) Can we still have cold winters during global warming?

A) Winters should be hot
B) Only in tropical countries
C) Weather can still vary in different regions
D) Not if climate change is real

7) Rapid warming is mainly...

A) Caused by volcanoes
B) Caused by humans
C) Caused by the Moon
D) Caused by time zones

8) How is climate different from weather?

A) Climate is just hot weather
B) Weather happens in outer space
C) Climate is long-term patterns
D) Weather is long-term, climate is daily

9) What is the best way to lower climate impact from waste?

A) Reduce it
B) Burn it
C) Hide it
D) Bury it

10) Why can global warming cause more flooding?

A) Heavier rainfall events
B) Storm drains overflow
C) Ice melts into rivers
D) Wetlands disappear

11) How do scientists measure global temperature?

A) Just from city rooftops
B) Only during summer
C) With satellites, thermometers, and nature
D) Using only weather apps

12) What helps us fight climate change?

A) Blaming the weather
B) Ignoring science
C) Waiting for others to fix it
D) Understanding facts and taking action

13) Is a couple of degrees of global warming really that serious?

A) Only in tropical countries
B) Not unless it reaches 3°C
C) Even +0.5°C greatly raises climate risks
D) Such warming is within natural variability

14) Can tree planting alone offset our carbon emissions effectively?

A) Yes, trees cancels out emissions
B) Only in tropical regions
C) No, cuts must come from fossil fuels
D) Yes, as long as the trees are certified

15) Do wind turbines only harm the environment and bird populations?

A) Major biodiversity threat
B) Careful siting reduces impact
C) Only if they're built offshore
D) They disrupt all migration routes

16) Does food waste drive climate change?

A) Only affects food supply
B) Mainly meat waste
C) Causes 8–10% of emissions
D) Mostly in developed countries

17) Why is composting better than landfilling when it comes to climate impact?

A) It traps more methane
B) It uses fewer trucks
C) It burns the waste instead of burying it
D) It prevents methane and enriches soil

18) Are all plant-based foods eco-friendly?

A) Always harmless
B) Some use lots of water/land
C) Only if they are eaten raw
D) As long as they're not imported

19) What is the main problem with rising CO_2 levels in the atmosphere?

A) CO_2 makes plants stop growing
B) CO_2 cools the planet too much
C) Excess CO_2 traps heat, causing climate change
D) CO_2 turns into toxic gas in the air

20) How does the textile industry impact the environment?

A) No impact, clothes biodegrade
B) Uses little water/materials
C) Big source of emissions, water use, pollution
D) Only harms forests

21) What is one major reason for rising sea levels?

A) Rainfall has increased worldwide
B) Rivers are overflowing more often
C) Forests are absorbing too much water
D) Melting glaciers and expanding seawater

22) How does investing in climate action affect the economy?

A) Causes unemployment
B) Creates green jobs, innovation
C) Slows technology
D) Raises costs only

23) Why might electric cars be a smarter long-term choice than petrol or diesel cars?

A) Batteries fail every 3 yrs
B) Charging always faster
C) Zero impact overall
D) Cost less to run and maintain over time

24) Do compostable packages solve the plastic problem?

A) Yes, they decompose anywhere
B) Only in industrial composting
C) No, they still create waste if mismanaged
D) Only if made from paper

CHECKMATE - Climate Myth Busting Challange Quiz Responses

1C – Global warming disrupts rainfall cycles, causing year-long droughts, while fewer hurricanes, mild weather, or reduced heatwaves are not effects.

2B – Animals can survive climate change by moving to new habitats or adapting their behaviour, while other options don't reflect real survival strategies.

3B – Migration to another planet isn't technically feasible with today's science, making the protection and care of Earth our only realistic solution.

4A – Renewable energy provides an unlimited, clean supply without pollution, unlike fossil fuels that rely on limited resources and pollute air and water.

5B – Oceans absorb most of the excess heat from global warming, leading to stronger storms, rising sea levels, and major stresses on marine ecosystems.

6C – Cold winters are still possible during global warming because it shifts long-term averages, not individual weather events in every single region.

7B – Human actions like burning fossil fuels are the main cause of rapid warming, while volcanoes, the Moon, or time zones have little to no impact.

8C – Climate describes long-term weather patterns across decades, while weather is short-term and daily, so the two terms cannot be used interchangeably.

9A – The most effective way to lower climate impact from waste is to reduce it at the source, rather than burning, hiding, or burying garbage afterwards.

10A – Global warming increases flooding risk because rising temperatures intensify heavy rainfall events, unlike drains, wetlands, or simple ice melt.

11C – Scientists use satellites, thermometers, and natural indicators worldwide to measure global temperature, not rooftops, summer, or weather apps.

12D – Climate change is best addressed by understanding facts and taking action, instead of blaming weather, ignoring science, or waiting for others.

13C – Even half a degree of global warming greatly raises climate risks such as droughts, floods, and sea-level rise, showing how serious small rises are.

14C – Tree planting helps but cannot fully offset emissions, since real reductions must come from cutting fossil fuel use at the global scale.

15B – Wind turbines have reduced impact when carefully sited, countering myths that they are always major biodiversity threats or disrupt all routes.

16C – Food waste contributes 8–10% of global greenhouse gas emissions, making it a major climate issue beyond simply affecting food supply or meat.

17D – Composting prevents methane by using oxygen and enriches soil, unlike landfills that produce harmful gases or practices like burning waste.

18B – Not all plant-based foods are eco-friendly; some crops require high water or land use, so the environmental impact varies widely by product.

19C – Rising CO_2 traps heat in the atmosphere and causes climate change, not cooling the planet, stopping plants from growing, or becoming toxic.

20C – The textile industry creates major emissions, high water use, and chemical pollution, making fashion a serious environmental challenge globally.

21D – Sea levels rise mostly due to melting glaciers and expanding seawater, not simply rainfall, overflowing rivers, or forests absorbing water.

22B – Investing in climate action supports the economy by creating green jobs and boosting innovation, instead of causing unemployment or high costs.

23D – Electric cars are a smarter long-term choice as they cost less to run and maintain over time, unlike petrol or diesel cars that remain expensive.

24C – Compostable packaging doesn't fully solve plastic waste since many types require industrial composting and still create waste if mismanaged.

CHECKMATE Printable Group Discussion Topics

EXTREME WEATHER: JUST NATURAL OR CLIMATE-DRIVEN?

Are floods, wildfires, and storms really getting worse because of climate change?

“IT’S COLD TODAY” – CAN THAT DISPROVE GLOBAL WARMING?

Does a cold winter mean global warming isn’t real?

WHO’S RESPONSIBLE FOR CLIMATE CHANGE — AND WHY DOES IT MATTER?

Should we focus on blame, or work together on fair climate solutions?

“THE CLIMATE HAS ALWAYS CHANGED” – SO WHAT’S NEW?

How is today’s climate change different from natural shifts in the past?

ARE ELECTRIC CARS, RENEWABLES, AND OFFSETTING JUST GREENWASHING?

Are eco-solutions like electric cars and tree planting actually making a difference?

CAN WE JUST MOVE TO MARS OR ADAPT LIKE ANIMALS?

Are backup plans like space travel or animal adaptation realistic climate solutions?

FOOD & CLIMATE: IS MEAT, WASTE, OR PACKAGING THE REAL PROBLEM?

What’s the climate impact of food waste, meat, compost, and packaging?

DOES FASHION HAVE A CLIMATE FOOTPRINT?

How do clothes, fast fashion, and textiles affect the environment?

CAN CLIMATE ACTION CREATE NEW OPPORTUNITIES?

How can green solutions support jobs, innovation, and a fair economy?

IS CLIMATE CHANGE JUST A CONSPIRACY?

Why do some people believe climate change is fake, exaggerated, or part of a political agenda?

CHECKMATE Myth-Busting Group Worksheet

MYTH STATEMENT

Write down the myth you're working with.

TOOLKIT FACT

What does the Toolkit say?

WHERE MIGHT THIS MYTH APPEAR?

TikTok? School? YouTube? Family conversations?

WHY DO YOU THINK THIS MYTH SPREADS?

List at least one reason.

HOW WOULD YOU EXPLAIN THE REAL FACT TO A FRIEND?

Use simple, youth-friendly language.

CHECKMATE Fact-Check Checklist

THINGS TO CONSIDER EVERY TIME YOU SEE A SUSPICIOUS POST OR NEWS ARTICLE:

WHO IS THE SOURCE?

- [ ] Is it a trusted organization, scientist, or journalist?
- [ ] Is the author named and credible?

ARE THERE ANY SOURCES OR DATA?

- [ ] Does it link to real research or official data?
- [ ] Can you find this info on other reliable websites?

CHECK THE DATE.

- [ ] Is it recent or outdated?
- [ ] Is it reshared out of context?

IS IT TRYING TO MAKE YOU ANGRY, SCARED, OR SHOCKED?

- [ ] Emotional content spreads faster - stop and think before sharing.

IS IT CLICKBAIT?

- [ ] Does the headline sound exaggerated, dramatic, or too shocking to be true?
- [ ] If it makes you go “WHAT?!” - double check before clicking or sharing.

IS IT A PERSONAL OPINION OR A FACT?

- [ ] Does it sound like a rant, or does it offer balanced, evidence-based info?

DOES THE IMAGE OR VIDEO LOOK REAL?

- [ ] Reverse image search suspicious photos (e.g. via Google or TinEye).
- [ ] Ask: could this be edited, AI-generated, or taken out of context?

WHAT DO OTHER TRUSTWORTHY SOURCES SAY?

- [ ] Check if science organizations, universities, or credible news outlets report the same thing.
- [ ] Be cautious if only one website or influencer is pushing the message.

TALK ABOUT IT.

- [ ] When in doubt discuss it with a friend or youth worker, ask what they think before you believe and/or share it.

Living Labs and Game-Based Learning to Checkmate Climate Misinformation

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