

Response to the Climate Emergency

Why us? Why now?



1

What - Climate Catastrophe / Tipping Points

- **Signals of Collapse of the Gulf Stream**
 - Currents are already at their slowest point in at least 1,600 years, and recent analysis shows they may be nearing a shutdown (linked to lower salinity due to melt).
 - Threat: severely disrupting the rains that billions of people depend on for food in India, South America and West Africa; increasing storms and lowering temperatures in Europe; and pushing up the sea level off eastern North America
- **Polar Ice Melt - positive feedback**
 - Melting ice exposes darker water or land, further accelerating warming, melting more ice..
- **Warming/water vapor/more warming - another positive feedback cycle**
 - As air warms, it holds more water vapor, which increases the heat trapping capacity of air, which leads to more warming
- **Methane released from thawed permafrost**
 - *Another positive feedback cycle* - the released methane is of course a potent greenhouse gas
- **Acidification of the Oceans**
 - Additional CO₂ absorbed by ocean raises pH
 - Threat to entire ocean foodweb
- **Rain forest deforestation**
 - As forest is cut down, its ability to maintain microclimate that supports forest fails and carbon-retaining forest replaced with savanna.

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What - Climate Catastrophe / Local Impacts

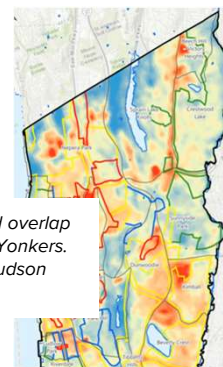
- **Storms/flooding**
 - Sandy, Ida - lives ruined, \$billions in damages, more billions to prepare for the next ones
 - Increase in frequency and severity of flooding (both storms and sea-level rise)
 - Today, New York has 431,000 people at risk of coastal flooding. By 2050, an additional 228,000 people are projected to be at risk due to sea level rise.
- **Warming impacts**
 - Currently, New York averages fewer than 5 dangerous heat days each year. By 2050, New York is projected to see 10 such days each year.
 - Increased evaporation and lower recharge rates will lower Great Lakes water levels, threatening wildlife and reducing waters supplies for electricity generation.
- **Health**
 - Stressing old stormwater and sewage systems - frequent releases
 - Increase in the number and range of disease carrying insects and ticks

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Who - everybody

- **But vulnerable are ... more vulnerable**
 - Risks disproportionately born by the old, young, health-compromised and economically disadvantaged.
- **Our externalized environmental problems hurt others first, but eventually... (there is no Planet B!).**
 - Our large footprint may not always be obvious in day-to-day life in Lewisboro, but we can't escape the those impacts



Map showing heat island overlap with historic redlining in Yonkers. (study by Groundwork Hudson Valley)



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Who - everybody

- But especially the young

Study: Young People's Voices on Climate Anxiety, Government Betrayal and Moral Injury: A Global Phenomenon

Methods: We surveyed 10,000 young people (aged 16-25 years) in ten countries. Data were collected on their thoughts and feelings about climate change, and government response.

Findings: Respondents were worried about climate change (59% very or extremely worried, 84% at least moderately worried). Over 50% felt sad, anxious, angry, powerless, helpless, and guilty. **Over 45% said their feelings about climate change negatively affected their daily life and functioning**, and many reported a high number of negative thoughts about climate change.



Correlations indicated that climate anxiety and distress were significantly related to perceived inadequate government response and associated feelings of betrayal.

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What - Declaration, but more importantly action!

We are proposing to join our voice the declaration of a Climate Emergency, but more important - commitment and organizing for action:

1. Commitment to **establish and achieve climate goals** consistent with NYS and the recommended max 1.5°C global rise.
2. **Organization / accountability** - in particular for municipal operations; that means identifying in staff roles
3. Communicate renewed **encouragement and urgency to the Sustainability Advisory Committee**

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Footnotes

- Collapse of the Gulf Stream: Climate crisis: “Scientists spot warning signs of Gulf Stream collapse: - <https://www.theguardian.com/environment/2021/aug/05/climate-crisis-scientists-spot-warning-signs-of-gulf-stream-collapse>
- Arctic Amplification: A Very Bad Positive Feedback Loop: <https://www.air-worldwide.com/blog/posts/2019/4/arctic-amplification-a-very-bad-positive-feedback-loop/>
- " How feedback loops are making the climate crisis worse“ - <https://www.climaterealityproject.org/blog/how-feedback-loops-are-making-climate-crisis-worse>
- “The methane time bomb” - <https://www.sciencedirect.com/science/article/pii/S187661021830136X>
- “Effects of Ocean Acidification on Marine Species & Ecosystems” - <https://usa.oceana.org/effects-ocean-acidification-marine-species-ecosystems>
- “A rainforest retreat” - <https://www.reuters.com/investigates/special-report/climate-un-amazon-tipping-point/states-at-risk/>
- States At Risk - <https://statesatrisk.org/new-york/extreme-heat>
- “Climate change increases the number and geographic range of disease... “ https://www.cdc.gov/climateandhealth/pubs/vector-borne-disease-final_508.pdf
- Climate Change Impacts In NY - https://www.nature.org/media/initiatives/new_york_factsheet_5.pdf
- “Young People's Voices on Climate Anxiety..” https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3918955