WEBVTT

00:00:01.250 --> 00:00:02.810 - Okay, so welcome everyone.

00:00:02.810 --> 00:00:05.620 I think we'll get started.

00:00:05.620 --> 00:00:07.680 I'm Robert Dubrow.

00:00:07.680 --> 00:00:09.710 I'm the Faculty Director

00:00:09.710 --> 00:00:12.820 of the Yale Center on Climate Change in Health

00:00:12.820 --> 00:00:14.873 and I'd like to welcome everyone.

00:00:15.860 --> 00:00:17.970 So our center works in the domains

00:00:17.970 --> 00:00:21.020 of research education and public health practice

00:00:21.020 --> 00:00:25.570 and also on the local and international levels.

00:00:25.570 --> 00:00:27.730 So of course, one of the main full side

00:00:27.730 --> 00:00:31.313 of our work is Connecticut, where we live and work.

00:00:32.410 --> 00:00:34.690 So with the goal of helping policy makers

00:00:34.690 --> 00:00:38.060 and advocates in Connecticut advance your work,

00:00:38.060 --> 00:00:41.280 this sensor and Laura in particular, put a great deal

00:00:41.280 --> 00:00:45.730 of effort into researching and writing climate change health

00:00:45.730 --> 00:00:48.093 in Connecticut, the 2020 report.

00:00:48.970 --> 00:00:53.180 So it's a pleasure to introduce Dr. Laura Bozzi

00:00:53.180 --> 00:00:55.810 who's our Director of Programs

00:00:55.810 --> 00:00:58.030 and the lead author of the report.

00:00:58.030 --> 00:01:01.653 And she'll be presenting the report's main finding.

00:01:02.510 --> 00:01:04.920 Just a couple of housekeeping items

00:01:05.950 --> 00:01:07.800 for this webinar being recorded

00:01:07.800 --> 00:01:11.460 and it'll be available on our website there on.

00:01:11.460 --> 00:01:14.710 Second, be sure to stay muted.

00:01:14.710 --> 00:01:17.630 And third, if you have questions, you can put them

00:01:17.630 --> 00:01:20.710 into the chat box and we'll have a question

00:01:20.710 --> 00:01:24.260 and answer period at the end of Laura's presentation.

00:01:24.260 --> 00:01:29.260 So Laura, we're looking forward to your presentation.

00:01:29.440 --> 00:01:34.170 - Great, thanks Rob and welcome everyone.

00:01:34.170 --> 00:01:38.180 First I wanna think and recognize Rob as the co-author

00:01:38.180 --> 00:01:40.650 of this report that we'll discuss today,

00:01:40.650 --> 00:01:42.230 as well as some other contributors

00:01:42.230 --> 00:01:45.710 that are Ian Maro, Diaz Hernandez, Chi Chen

00:01:45.710 --> 00:01:47.973 in a former student at Melville Vessel.

00:01:49.990 --> 00:01:50.823 So thank you again

00:01:50.823 --> 00:01:52.883 for your interest in this important topic.

00:01:54.380 --> 00:01:57.510 Let's see, Rob mentioned the center a bit

00:01:57.510 --> 00:01:59.230 but just want to orient you

00:01:59.230 --> 00:02:02.010 to the Yale Center on Climate Change in Health.

00:02:02.010 --> 00:02:03.740 As Rob mentioned, our work is global

00:02:03.740 --> 00:02:06.290 but we have a particular focus here in Connecticut.

00:02:08.990 --> 00:02:11.900 And we invite you to stay engaged

00:02:11.900 --> 00:02:13.650 with the Yale Center and Climate Change in Health.

00:02:13.650 --> 00:02:16.980 We have a great slate of webinars

00:02:16.980 --> 00:02:18.630 that are coming up this semester.

00:02:19.760 --> 00:02:22.300 You can sign up for them on Eventbrite,

00:02:22.300 --> 00:02:25.530 learn about the more on our website

00:02:25.530 --> 00:02:28.330 and I think Myra is putting in links into the chat

00:02:28.330 --> 00:02:29.970 and please stay connected with us.

00:02:29.970 --> 00:02:32.170 You can follow us on social media.

00:02:32.170 --> 00:02:35.573 You can sign up for our newsletter on our website.

00:02:38.730 --> 00:02:40.003 So onto the report.

00:02:40.850 --> 00:02:44.190 We released this report in September of 2020.

00:02:44.190 --> 00:02:46.010 We hope it provides a comprehensive look

00:02:46.010 --> 00:02:48.560 at climate change and health in Connecticut.

00:02:48.560 --> 00:02:52.710 It covers 19 indicators across four domains, temperature,

00:02:52.710 --> 00:02:55.820 extreme events, infectious diseases, and air quality.

00:02:55.820 --> 00:02:59.910 You'll see the list of 19 indicators to your right.

00:02:59.910 --> 00:03:02.650 It's purpose is to inform policy makers,

00:03:02.650 --> 00:03:05.520 health professionals, advocates and residents.

00:03:05.520 --> 00:03:06.910 Many of you on the call today

00:03:06.910 --> 00:03:09.120 about the impact of climate change

00:03:09.120 --> 00:03:11.200 now in the future on the health

00:03:11.200 --> 00:03:13.463 either on human health in Connecticut.

00:03:15.030 --> 00:03:18.030 Wherever possible we report indicators are for each County

00:03:18.030 --> 00:03:21.200 and those who aren't from Connecticut, other eight counties

00:03:21.200 --> 00:03:24.223 which makes it a better reasonable task.

00:03:25.180 --> 00:03:27.710 And we tracked as far back as the data set would allow.

00:03:27.710 --> 00:03:30.573 Some of our data sets went back to the late 1800s.

00:03:31.560 --> 00:03:33.870 I'll note though that in this presentation

00:03:33.870 --> 00:03:36.130 I'm largely showing the statewide results.

00:03:36.130 --> 00:03:38.460 So really encourage you to look at the report

00:03:38.460 --> 00:03:42.110 if you're looking for the County level results.

00:03:42.110 --> 00:03:43.860 And we noted linear trends

00:03:43.860 --> 00:03:46.270 when they are statistically significant.

00:03:46.270 --> 00:03:48.260 Some of the trends were significant

00:03:48.260 --> 00:03:52.800 and they were demonstrating trends consistent

00:03:52.800 --> 00:03:54.970 with what we'd expect under climate change

00:03:54.970 --> 00:03:57.350 like increasing average temperature.

00:03:57.350 --> 00:04:02.150 The others don't show trends yet, but we report

00:04:03.370 --> 00:04:05.470 in our findings about scientific studies

00:04:05.470 --> 00:04:09.253 and how they project those changes to occur in the future.

00:04:10.670 --> 00:04:13.020 So I'll plot on some of the indicators

00:04:13.020 --> 00:04:15.380 but 19 is a lot to cover in less than an hour

00:04:15.380 --> 00:04:18.773 so again, please check out our report on the website.

00:04:21.590 --> 00:04:25.040 And I'll tell you a little bit more about our data sources.

00:04:25.040 --> 00:04:27.820 So we used all publicly available data

00:04:27.820 --> 00:04:29.790 from federal agencies, State agencies

00:04:29.790 --> 00:04:31.520 and a medical association.

00:04:31.520 --> 00:04:36.210 We were particularly looking at federal agency data

00:04:36.210 --> 00:04:38.620 and that means that it's largely available

00:04:38.620 --> 00:04:40.020 across the country.

00:04:40.020 --> 00:04:43.410 So if you're in another state and you want to look at this,

00:04:43.410 --> 00:04:46.480 you can reference our data sources.

00:04:46.480 --> 00:04:49.950 And I'll note, one of them that I think is really useful

00:04:49.950 --> 00:04:52.660 particularly in say a classroom, is this climate

00:04:52.660 --> 00:04:56.080 at a glance from Noah and see in the center on the right

00:04:56.080 --> 00:04:59.900 or you can access temperature and precipitation data

00:05:01.330 --> 00:05:04.353 since the late 1800s as you'll see that we used.

00:05:08.750 --> 00:05:11.090 To give you some context for our report.

00:05:11.090 --> 00:05:12.540 I want to summarize some

00:05:12.540 --> 00:05:15.160 projected climate change impacts in Connecticut.

00:05:15.160 --> 00:05:19.160 These are largely drawn from a really important report

00:05:19.160 --> 00:05:22.030 that came from a UCONN and CIRCA researchers

00:05:22.030 --> 00:05:24.830 called the Connecticut physical science assessment report,

00:05:24.830 --> 00:05:26.680 as well as updates that are found

00:05:26.680 --> 00:05:28.970 in the governor's council on climate change,

00:05:28.970 --> 00:05:30.790 Connecticut governor's council on climate change report

00:05:30.790 --> 00:05:33.590 from the science and technology committee.

00:05:33.590 --> 00:05:37.300 And one thing to note is that there's high confidence

00:05:37.300 --> 00:05:40.880 in projected changes through mid-century, so about 2050,

00:05:40.880 --> 00:05:44.570 but then the projections after mid-century really depends

00:05:44.570 --> 00:05:47.840 on the actions that we take now to mitigate climate change

00:05:47.840 --> 00:05:51.820 and reduce an end our use of fossil fuels.

00:05:51.820 --> 00:05:55.430 And in fact, the GC3 report wrote recently

00:05:55.430 --> 00:05:59.230 coordinated mitigation now means it's more likely

00:05:59.230 --> 00:06:01.710 that the temperature will stabilize after 2050

00:06:01.710 --> 00:06:04.033 if not warming is likely to accelerate.

00:06:05.300 --> 00:06:08.840 So to summarize some of the projections.

00:06:08.840 --> 00:06:12.830 This is from the UCONN CIRCA report.

00:06:12.830 --> 00:06:14.580 They project a five degree increase

00:06:14.580 --> 00:06:19.580 in annual average temperature by mid-century compared

00:06:19.730 --> 00:06:23.630 to the base period of 1970 to 1999.

00:06:24.860 --> 00:06:29.070 In that same period, 8.5% increase in annual precipitation

00:06:29.070 --> 00:06:31.160 but this is mostly due to increases

00:06:31.160 --> 00:06:33.213 in the winter and the spring.

00:06:35.199 --> 00:06:38.810 Because of that increase in heavy rainfall events,

00:06:38.810 --> 00:06:39.993 a greater flood risk.

00:06:40.940 --> 00:06:44.640 And while there is more annual precipitation,

00:06:44.640 --> 00:06:47.580 there's less in the summer increasing summer droughts

00:06:48.599 --> 00:06:49.480 up to three times as often

00:06:49.480 --> 00:06:51.280 by the end of the century I believe.

00:06:52.780 --> 00:06:57.620 Additionally warm spell days which are like heat waves.

00:06:57.620 --> 00:07:00.190 They project those to increase from less than three

00:07:00.190 --> 00:07:04.320 per year in the 1950s to 44 per year in 2050

00:07:04.320 --> 00:07:07.080 and more than 120 per year by 2100.

00:07:07.080 --> 00:07:10.453 That's with business as usual high emissions scenario.

00:07:13.210 --> 00:07:15.920 For sea level rise, there are projections of 20 inches

00:07:15.920 --> 00:07:19.640 or a half a meter by 2050, but then what happens

00:07:19.640 --> 00:07:22.260 after that really depends on our climate actions.

00:07:22.260 --> 00:07:27.260 So without a strong reduction in CO2 emissions,

00:07:27.410 --> 00:07:28.850 recent work indicates that it could be

00:07:28.850 --> 00:07:32.593 up to 80 inches or 6.7 feet by 2100.

00:07:33.859 --> 00:07:36.670 And finally Atlantic hurricanes are expected

00:07:36.670 --> 00:07:40.210 to become more intense, meaning greater wind speed

00:07:40.210 --> 00:07:42.173 with greater amounts of precipitation.

00:07:45.920 --> 00:07:48.130 Well, climate change affects everyone.

00:07:48.130 --> 00:07:50.710 It does not affect everyone equally.

00:07:50.710 --> 00:07:53.393 It's often called a climate risk amplifier.

00:07:54.330 --> 00:07:56.240 Some people are more vulnerable to others

00:07:56.240 --> 00:07:59.340 because of where they live or work their age or race,

00:07:59.340 --> 00:08:02.390 their health condition, their social economic status.

00:08:02.390 --> 00:08:05.050 And you can see that depicted in this graphic.

00:08:05.050 --> 00:08:07.670 And essentially vulnerability is a function

00:08:07.670 --> 00:08:11.110 of three factors, exposure or how much a person

00:08:11.110 --> 00:08:13.630 is in contact with the climate hazard,

00:08:13.630 --> 00:08:17.520 sensitivity which is how much

00:08:20.180 --> 00:08:22.210 the climate hazard affects them

00:08:22.210 --> 00:08:23.990 which can differ from person to person

00:08:23.990 --> 00:08:27.720 based on biological traits and socioeconomic status,

00:08:27.720 --> 00:08:30.500 and an individual or community's adaptive capacity

00:08:30.500 --> 00:08:32.780 which is its ability to adapt

00:08:32.780 --> 00:08:35.280 or to cope with that climate hazard.

00:08:35.280 --> 00:08:37.210 And as you can imagine, this can be bolstered

00:08:37.210 --> 00:08:39.900 by resilience planning or by access to resources

00:08:39.900 --> 00:08:43.240 and it can be hampered

00:08:43.240 --> 00:08:46.230 by historic disinvestment in communities

00:08:47.930 --> 00:08:51.093 structural racism and larger structural factors.

00:08:54.110 --> 00:08:57.040 And I'll return to this issue of vulnerability

00:08:57.040 --> 00:09:00.393 and equity throughout the presentation.

00:09:01.890 --> 00:09:05.050 So I'll move on to the reports findings

00:09:05.050 --> 00:09:07.120 first around temperature.

00:09:07.120 --> 00:09:10.029 So annual average temperature is increased

00:09:10.029 --> 00:09:12.850 over three degrees Fahrenheit across Connecticut

00:09:12.850 --> 00:09:16.470 and in each County over the last 125 years.

00:09:16.470 --> 00:09:19.680 And in fact, six of the hottest years in Connecticut

00:09:19.680 --> 00:09:20.587 have been since 2005.

00:09:20.587 --> 00:09:23.840 And so you can see on this graph or the center line

00:09:23.840 --> 00:09:27.780 is the average for the 1900s of temperature.

00:09:27.780 --> 00:09:32.660 So all of the bars in later years are above zero

00:09:32.660 --> 00:09:34.910 meaning that they're higher than the average.

00:09:37.900 --> 00:09:39.950 So what does this mean for health?

00:09:39.950 --> 00:09:42.110 So there's wide range in effects

00:09:42.110 --> 00:09:44.913 and I'll talk about some of them in later slides.

00:09:45.760 --> 00:09:46.790 High heat days can cause

00:09:46.790 --> 00:09:50.090 heat stress, heat stroke and even death.

00:09:50.090 --> 00:09:51.970 High temperatures interact with air pollution

00:09:51.970 --> 00:09:56.463 particularly smog to produce even larger health impacts.

00:09:57.700 --> 00:10:01.430 Warmer winters create conditions for larger tick

00:10:01.430 --> 00:10:03.540 and mosquito populations that are active

00:10:03.540 --> 00:10:06.270 over a greater proportion of the year.

00:10:06.270 --> 00:10:08.400 It creates a longer season for ragweed pollen

00:10:08.400 --> 00:10:10.683 which causes hay fever, exacerbates asthma.

00:10:11.710 --> 00:10:15.170 We have another indicator that I don't present here

00:10:15.170 --> 00:10:18.400 but where we looked at frost days, which are days under 30

00:10:18.400 --> 00:10:21.010 under freezing where the temperature reaches under freezing.

00:10:21.010 --> 00:10:22.940 And we found that it decreased

00:10:22.940 --> 00:10:26.463 from 1950 to 2018 in four of the eight counties.

00:10:28.340 --> 00:10:30.310 And this has important ecological

00:10:30.310 --> 00:10:32.850 and then human health consequences.

00:10:32.850 --> 00:10:35.540 It can lead to more plant pests and longer season

00:10:35.540 --> 00:10:38.860 for their activity affecting both forests and agriculture.

00:10:38.860 --> 00:10:42.920 And I'll point in particular to something

00:10:42.920 --> 00:10:45.513 that the 2018 National Climate Assessment,

00:10:46.910 --> 00:10:49.760 they framed the Northeast chapter around

00:10:49.760 --> 00:10:52.170 changes in how this affects our seasonality

00:10:52.170 --> 00:10:54.420 and how that affects our sense of place.

00:10:54.420 --> 00:10:56.700 They noted that the seasonality of the Northeast

00:10:56.700 --> 00:10:58.430 is central to the region's sense of place

00:10:58.430 --> 00:11:01.970 and that it's an important driver of rural economies.

00:11:01.970 --> 00:11:06.970 So wide range in impacts from these warming temperatures.

00:11:09.890 --> 00:11:12.640 Digging down a little bit more on heat related illness.

00:11:15.610 --> 00:11:17.520 Extreme heat stresses the body's ability

00:11:17.520 --> 00:11:19.240 to maintain it's normal temperature,

00:11:19.240 --> 00:11:21.140 which can lead to heat related illness.

00:11:21.140 --> 00:11:23.440 And this may require emergency medical treatment

00:11:23.440 --> 00:11:27.800 or hospitalization, severe cases that can cause death.

00:11:27.800 --> 00:11:30.740 In Connecticut from 2007 to 2016,

00:11:30.740 --> 00:11:34.000 there were an average 422 ed visits

00:11:34.000 --> 00:11:37.623 and 45 hospitalizations per year for heat stress.

00:11:40.000 --> 00:11:43.700 As I said before, vulnerability is a function of exposure,

00:11:43.700 --> 00:11:47.150 sensitivity, and adaptive capacity.

00:11:47.150 --> 00:11:51.310 And on the right, you see a figure

00:11:51.310 --> 00:11:52.860 of the urban heat island effect.

00:11:52.860 --> 00:11:56.930 So this is the phenomenon where cities are hotter

00:11:56.930 --> 00:11:58.970 than the surrounding areas because of

00:12:00.810 --> 00:12:05.210 the greater heat generation and the absorption of heat

00:12:05.210 --> 00:12:09.423 due to the human materials.

00:12:10.410 --> 00:12:12.740 So you can see that there's greater exposure

00:12:12.740 --> 00:12:16.283 to heat in cities in Connecticut than in other parts.

00:12:17.140 --> 00:12:20.090 And that this is particularly an issue

00:12:20.090 --> 00:12:23.000 for residents in cities who have low financial

00:12:23.000 --> 00:12:24.853 or social resources to adapt.

00:12:26.130 --> 00:12:29.720 After our workers are another group with higher exposure

00:12:29.720 --> 00:12:33.837 to extreme heat, and may have limited ability to change.

00:12:35.450 --> 00:12:36.530 They have to work outside

00:12:36.530 --> 00:12:39.091 and if there aren't protective policies,

00:12:39.091 --> 00:12:41.190 then they may be at more risk.

00:12:41.190 --> 00:12:44.080 Other vulnerable populations include the old and the young,

00:12:44.080 --> 00:12:46.400 those with pre-existing medical conditions,

00:12:46.400 --> 00:12:48.810 those with limited social and financial resources,

00:12:48.810 --> 00:12:50.793 athletes and pregnant women.

00:12:51.700 --> 00:12:54.110 In Connecticut well young people are more likely

00:12:54.110 --> 00:12:56.530 to be treated in hospital emergency rooms

00:12:56.530 --> 00:12:59.750 for heat related illness than other age groups.

00:12:59.750 --> 00:13:01.310 The risk of inpatient admission.

00:13:01.310 --> 00:13:03.480 So more serious heat related illness

00:13:05.720 --> 00:13:07.420 in Connecticut increases with age

00:13:07.420 --> 00:13:09.733 and it's highest for those 75 and older.

00:13:11.190 --> 00:13:12.980 And importantly note that

00:13:14.158 --> 00:13:16.220 these vulnerability factors are cumulative.

00:13:16.220 --> 00:13:19.180 So if you're someone that we're both,

00:13:19.180 --> 00:13:22.310 we're multiple correspond to you,

00:13:22.310 --> 00:13:23.710 then you're at greater risk.

00:13:31.129 --> 00:13:32.363 So what can we do?

00:13:34.060 --> 00:13:38.970 These are a number of possible steps forward

00:13:38.970 --> 00:13:42.180 in terms of both policy and personal action.

00:13:42.180 --> 00:13:45.110 So the first is to make homes cooler, more energy efficient

00:13:45.110 --> 00:13:47.313 and powered by renewable energy.

00:13:48.280 --> 00:13:50.820 And we can do that in Connecticut

00:13:50.820 --> 00:13:52.450 through some specific ways.

00:13:52.450 --> 00:13:56.100 We can expand our energy assistance program

00:13:56.100 --> 00:13:58.030 called (indistinct) to include cooling assistance

00:13:58.030 --> 00:14:03.030 to make those that can't afford air conditioning

00:14:03.510 --> 00:14:07.120 particularly if they are medically vulnerable

00:14:07.120 --> 00:14:10.320 to heat related illness to make that more available.

00:14:10.320 --> 00:14:15.320 At the same time, we need to also address weatherization

00:14:16.930 --> 00:14:18.963 to make homes more energy efficient.

00:14:20.794 --> 00:14:22.970 There's a lot of work happening in the State right now

00:14:22.970 --> 00:14:25.870 to address the barriers to weatherization

00:14:25.870 --> 00:14:27.680 so that more people can get their homes weatherized

00:14:27.680 --> 00:14:29.020 and more energy efficient.

00:14:29.020 --> 00:14:32.240 And then finally, we wanna do all these actions

00:14:32.240 --> 00:14:34.830 while ramping up renewable energy programs

00:14:34.830 --> 00:14:36.840 like shared solar to make sure that they work

00:14:36.840 --> 00:14:40.560 for low and middle income customers and renters

00:14:40.560 --> 00:14:42.950 so that there is both the protection

00:14:42.950 --> 00:14:46.289 against heat while also making sure

00:14:46.289 --> 00:14:48.593 that we are using renewable energy to do that.

00:14:50.760 --> 00:14:54.480 Another way to cool our neighborhoods

00:14:54.480 --> 00:14:57.530 is by supporting an urban tree planting and maintenance.

00:14:57.530 --> 00:15:01.860 And I think on this point, it's important to consider

00:15:01.860 --> 00:15:05.210 that the greatest cooling effect

00:15:06.090 --> 00:15:08.040 is often from a larger shade tree.

00:15:08.040 --> 00:15:09.160 So it's not just planting,

00:15:09.160 --> 00:15:11.440 but it's also maintaining our larger trees.

00:15:11.440 --> 00:15:13.790 And there's some really interesting programs

00:15:13.790 --> 00:15:18.130 around shade tree ordinances or increasing funding

00:15:18.130 --> 00:15:21.033 around maintenance for existing trees.

00:15:22.900 --> 00:15:25.100 We need to protect against heat related illnesses

00:15:25.100 --> 00:15:27.390 at work sites, schools, and sports teams

00:15:27.390 --> 00:15:32.390 by creating plans and enforcing them to make sure

00:15:32.430 --> 00:15:35.650 that those that are exerting themselves outside

00:15:37.257 --> 00:15:42.257 are acclimated and receive proper rest watershed

00:15:42.580 --> 00:15:45.520 and other important health provisions.

00:15:45.520 --> 00:15:47.740 And municipalities can develop

00:15:47.740 --> 00:15:50.510 and maintain local heat response plans.

00:15:50.510 --> 00:15:52.800 There's a recommendation in the governor's council

00:15:52.800 --> 00:15:56.540 on climate change report that the State create a framework

00:15:56.540 --> 00:16:00.640 that the municipalities could build from.

00:16:00.640 --> 00:16:03.970 And then for personal action, elderly,

00:16:03.970 --> 00:16:05.560 you can check on elderly neighbors

00:16:05.560 --> 00:16:07.810 during extreme heat events

00:16:07.810 --> 00:16:10.500 and you can help to cool your neighborhoods

00:16:10.500 --> 00:16:13.480 through tree plantings and maintenance

00:16:13.480 --> 00:16:15.933 or by painting your roof white.

00:16:19.030 --> 00:16:22.283 And we'll move on to extreme events.

00:16:24.250 --> 00:16:29.250 So in this, just check my papers.

00:16:30.495 --> 00:16:33.610 So this next indicator,

00:16:33.610 --> 00:16:37.120 we track the number of weather disasters

00:16:37.120 --> 00:16:41.000 federally declared disasters through FEMA

00:16:41.000 --> 00:16:43.810 and found that from 2010 to 2019

00:16:43.810 --> 00:16:46.860 there were nine federal disaster declarations

00:16:46.860 --> 00:16:48.750 for weather events in Connecticut

00:16:48.750 --> 00:16:52.320 compared to only 13 in the previous 56 years.

00:16:52.320 --> 00:16:54.560 And you can see here that there are a number

00:16:54.560 --> 00:16:58.283 of quite memorable storms like Irene and Sandy,

00:16:59.842 --> 00:17:03.340 the Halloween or Easter, and some others

00:17:03.340 --> 00:17:06.623 and that they affected all counties in the State.

00:17:08.980 --> 00:17:11.830 So what does this mean for health?

00:17:11.830 --> 00:17:13.390 There are, of course, the immediate dangers

00:17:13.390 --> 00:17:17.080 from severe storms and flooding like drowning or injuries

00:17:18.070 --> 00:17:21.930 but there are other impacts, particularly due

00:17:21.930 --> 00:17:24.640 to disruption of critical infrastructure

00:17:24.640 --> 00:17:27.200 like the likes of electricity or sanitation,

00:17:27.200 --> 00:17:31.960 drinking water supplies, food, refrigeration, phone service.

00:17:31.960 --> 00:17:34.780 And this is important because it can interfere

00:17:34.780 --> 00:17:36.393 with access to medical care.

00:17:37.920 --> 00:17:41.130 It may be that if someone loses electricity

00:17:41.130 --> 00:17:43.810 and then they're on an electric medical device

00:17:43.810 --> 00:17:46.730 like for dialysis, that can be life-threatening.

00:17:46.730 --> 00:17:49.810 Roads may be closed so that ambulances

00:17:49.810 --> 00:17:52.400 can't reach someone in need.

00:17:52.400 --> 00:17:54.080 So these are important ways where

00:17:56.200 --> 00:17:59.130 there are larger longer-term ramifications

00:18:00.100 --> 00:18:02.150 from extreme events.

00:18:02.150 --> 00:18:05.940 There are also less visible but critically important issues

00:18:05.940 --> 00:18:09.823 related to mental health from disasters.

00:18:10.850 --> 00:18:13.950 Individuals, for instance whose households experienced

00:18:15.460 --> 00:18:19.680 a flood reported higher levels of depression than anxiety.

00:18:19.680 --> 00:18:22.463 These can persist for several years after an event.

00:18:23.730 --> 00:18:27.630 And finally, there is the building stock

00:18:27.630 --> 00:18:29.330 in lower income neighborhoods is often

00:18:29.330 --> 00:18:32.950 at increased risk for damage from natural disasters.

00:18:32.950 --> 00:18:37.370 And that this is in part due to structural inequality

00:18:37.370 --> 00:18:38.690 because of historic patterns

00:18:38.690 --> 00:18:42.920 of development in vulnerable areas and under investment

00:18:42.920 --> 00:18:45.820 in the public infrastructure in some areas

00:18:45.820 --> 00:18:50.340 leaving some more at risk than others

00:18:50.340 --> 00:18:52.263 within a given location.

00:18:56.400 --> 00:18:57.900 The next indicator looked at

00:18:58.750 --> 00:19:00.960 an interesting issue of Superfund sites.

00:19:00.960 --> 00:19:05.500 So the CIRCLA federal law on nicknamed Superfund

00:19:05.500 --> 00:19:07.530 identifies and cleans up polluted sites.

00:19:07.530 --> 00:19:09.770 There are thousands of these across the country,

00:19:09.770 --> 00:19:12.150 manufacturing facilities and processing plants,

00:19:12.150 --> 00:19:16.550 landfills, mining sites, and for this indicator

00:19:16.550 --> 00:19:19.000 we use data from the government accountability office

00:19:19.000 --> 00:19:22.600 where they looked at all Superfund sites in the country

00:19:22.600 --> 00:19:25.970 and using GIS they mapped which ones were vulnerable

00:19:25.970 --> 00:19:28.083 to different climate impacts.

00:19:28.920 --> 00:19:33.070 And for Connecticut, they found that seven sites,

00:19:33.070 --> 00:19:36.160 those marked on the map, out of Connecticut 16

00:19:37.630 --> 00:19:40.010 are vulnerable to climate change impacts.

00:19:40.010 --> 00:19:42.260 This is particularly that they're vulnerable,

00:19:43.410 --> 00:19:45.540 most are vulnerable to inland flooding,

00:19:45.540 --> 00:19:47.180 as you can see most of them are inland.

00:19:47.180 --> 00:19:49.810 There's one side at the bottom

00:19:49.810 --> 00:19:53.890 that's also vulnerable to hurricane impacts

00:19:53.890 --> 00:19:57.523 and hurricane storm surge and sea level rise.

00:19:58.390 --> 00:20:00.120 And this is a concern for human health

00:20:00.120 --> 00:20:04.400 because people can become exposed to the contaminants

00:20:04.400 --> 00:20:07.290 if they are released due to this impact

00:20:07.290 --> 00:20:10.240 and if they enter the ground or surface water

00:20:10.240 --> 00:20:12.440 or they get released into the air

00:20:12.440 --> 00:20:14.233 or they leach into the soil.

00:20:16.980 --> 00:20:21.980 Of course, this is another reason to prioritize

00:20:22.340 --> 00:20:26.943 investing in speedily cleaning up these contaminated sites.

00:20:30.730 --> 00:20:33.020 The next indicator I'll cover is high tide flooding.

00:20:33.020 --> 00:20:35.530 So high tide flooding is what it sounds like.

00:20:35.530 --> 00:20:38.603 It's that an area floods only during high tide,

00:20:40.440 --> 00:20:45.190 but that is related to sea level.

00:20:45.190 --> 00:20:48.310 And so as sea level increases,

00:20:48.310 --> 00:20:51.373 then high tide flooding becomes more common.

00:20:52.320 --> 00:20:54.140 And we can see that that is the case.

00:20:54.140 --> 00:20:57.780 There are two sites in Connecticut where this is measured,

00:20:57.780 --> 00:20:59.220 in New London and in Bridgeport.

00:20:59.220 --> 00:21:04.220 And I'm showing here the New London figure,

00:21:05.580 --> 00:21:09.280 but we see that the number has increased significantly

00:21:09.280 --> 00:21:11.833 since the beginning of the measurement period.

00:21:14.770 --> 00:21:17.970 And in and of itself high tide flooding

00:21:19.262 --> 00:21:22.100 is not of significant health risk

00:21:25.350 --> 00:21:26.770 but as it becomes more common

00:21:26.770 --> 00:21:31.220 then it can become certainly more concerning.

00:21:31.220 --> 00:21:33.220 And why is that?

00:21:33.220 --> 00:21:34.990 So one reason is that it

00:21:34.990 --> 00:21:37.670 can transmit pathogens like Vibrio bacteria

00:21:37.670 --> 00:21:40.390 if you're walking through waters that are contaminated.

00:21:40.390 --> 00:21:42.910 It also can contaminate drinking water supplies

00:21:42.910 --> 00:21:47.150 particularly if they're wells that are close to the Coast

00:21:47.150 --> 00:21:50.203 or contaminate coastal agricultural fields.

00:21:52.430 --> 00:21:55.120 And with highly developed coastlines, Connecticut is also

00:21:55.120 --> 00:21:56.850 at risk for high tide flooding

00:21:56.850 --> 00:22:00.900 affecting large number of roads, homes, businesses

00:22:00.900 --> 00:22:03.603 and other infrastructure that are along the Coast.

00:22:09.860 --> 00:22:12.770 So again, what can we do about this?

00:22:12.770 --> 00:22:15.550 In terms of policy and planning,

00:22:15.550 --> 00:22:17.350 we can make our homes more affordable,

00:22:17.350 --> 00:22:21.410 healthy and climate resilient, particularly recognizing

00:22:21.410 --> 00:22:22.810 that many homes are in

00:22:22.810 --> 00:22:25.683 either floodplains or in coastal areas.

00:22:27.590 --> 00:22:30.900 And this is especially important for low income

00:22:30.900 --> 00:22:33.300 communities who are disproportionately underinsured

00:22:33.300 --> 00:22:36.130 for protection or renters who are vulnerable

00:22:36.130 --> 00:22:38.510 to displacement after a disaster.

00:22:38.510 --> 00:22:42.613 And so the more that we can make housing secure,

00:22:43.460 --> 00:22:46.843 the better prepared we are for future climate impacts.

00:22:47.790 --> 00:22:50.450 Another specific action that municipalities can take

00:22:50.450 --> 00:22:54.920 is to enroll in FEMA's community rating system program

00:22:54.920 --> 00:22:56.590 which is a voluntary incentive program

00:22:56.590 --> 00:23:00.940 that discounts flood insurance, premium rates for residents

00:23:00.940 --> 00:23:03.550 in the municipalities that participate.

00:23:03.550 --> 00:23:06.890 There are about 19 municipalities in Connecticut

00:23:06.890 --> 00:23:08.013 that now participate.

00:23:10.570 --> 00:23:14.330 We can do more emergency planning in a shared backup power

00:23:14.330 --> 00:23:17.590 at both congregate settings and senior living facilities

00:23:17.590 --> 00:23:19.030 to be sure that those sites

00:23:19.030 --> 00:23:24.030 where there are more vulnerable residents

00:23:24.220 --> 00:23:26.913 that they're prepared for extreme weather events.

00:23:28.220 --> 00:23:31.550 And then for personal action, know your risk.

00:23:31.550 --> 00:23:33.310 You can look up whether you're in a flood zone

00:23:33.310 --> 00:23:35.930 or what kind of hurricane evacuations on your end,

00:23:35.930 --> 00:23:39.540 you can look up what your hurricane evacuation route is.

00:23:39.540 --> 00:23:41.903 If you're in that area, you can make a plan.

00:23:43.210 --> 00:23:47.440 And say this recognizing that there are limitations

00:23:48.540 --> 00:23:52.430 that make that kind of planning needs there

00:23:52.430 --> 00:23:54.540 for some people than others.

00:23:54.540 --> 00:23:56.690 And then I didn't cover it,

00:23:56.690 --> 00:23:59.300 but we do have an indicator on drought.

00:23:59.300 --> 00:24:01.210 And as I mentioned before in the future,

00:24:01.210 --> 00:24:04.770 Connecticut is expected to experience

00:24:04.770 --> 00:24:06.883 more drought than in the past.

00:24:07.953 --> 00:24:10.200 And so it's important to now adopt

00:24:10.200 --> 00:24:11.930 more water conservation measures

00:24:11.930 --> 00:24:15.140 both at the individual level and the municipal levels

00:24:15.140 --> 00:24:18.240 including installation of efficient appliances

00:24:18.240 --> 00:24:22.823 and installing low impact designs and making retrofits.

00:24:25.910 --> 00:24:28.453 Third, we'll move to infectious diseases.

00:24:31.600 --> 00:24:35.450 We conducted a detailed assessment of mosquito abundance

00:24:35.450 --> 00:24:37.220 for this indicator using data

00:24:37.220 --> 00:24:40.660 from the Connecticut Agricultural Experiment Station.

00:24:40.660 --> 00:24:43.970 And we found that during 2001 to 2019

00:24:43.970 --> 00:24:47.530 of the 28 species found in Connecticut to carry viruses,

00:24:47.530 --> 00:24:49.300 that cause human disease,

00:24:49.300 --> 00:24:51.800 10 of those showed increasing abundance

00:24:51.800 --> 00:24:54.810 and three show trends of decrease in abundance.

00:24:54.810 --> 00:24:57.280 And this is important because mosquito abundance

00:24:57.280 --> 00:24:59.390 is a key factor that influences

00:24:59.390 --> 00:25:02.690 the capacity of the mosquito to transmit the virus

00:25:02.690 --> 00:25:05.163 and the rate in which infections spread.

00:25:06.450 --> 00:25:10.540 And you can see here a list of the mosquito species

00:25:12.330 --> 00:25:14.150 that each of the mosquito species you attract

00:25:14.150 --> 00:25:15.870 has been found to carry one or more

00:25:15.870 --> 00:25:18.530 of the following viruses that infect humans.

00:25:18.530 --> 00:25:21.640 And I'll note that we also have indicators

00:25:21.640 --> 00:25:25.153 that covered two these Tripoli and West Nile virus.

00:25:26.350 --> 00:25:28.870 And our findings here are important again,

00:25:28.870 --> 00:25:31.780 because increases in the abundance of mosquito species

00:25:31.780 --> 00:25:34.200 that are vectors for these diseases

00:25:34.200 --> 00:25:38.293 can lead to increases in the number of viral infections.

00:25:42.770 --> 00:25:45.720 On tick-borne illnesses, in fact,

00:25:45.720 --> 00:25:48.870 we found that the total number of cases of Lyme disease

00:25:48.870 --> 00:25:53.020 have decreased Statewide over the last decade or so,

00:25:53.020 --> 00:25:54.133 which is good news.

00:25:55.710 --> 00:25:58.503 However, there are emergency concerns.

00:25:59.370 --> 00:26:00.900 One issue that we highlight in the report

00:26:00.900 --> 00:26:03.350 is around lone star ticks.

00:26:03.350 --> 00:26:04.960 Lone star ticks transmit a number

00:26:04.960 --> 00:26:07.430 of diseases and medical conditions.

00:26:07.430 --> 00:26:09.850 And you can see the list there.

00:26:09.850 --> 00:26:12.420 The lone star tick is the most common human biting disease

00:26:12.420 --> 00:26:15.020 in the Southeastern United States.

00:26:15.020 --> 00:26:16.900 It's expanding into Connecticut likely

00:26:16.900 --> 00:26:20.343 due to climate factors particularly warming winters.

00:26:21.270 --> 00:26:22.370 And importantly that

00:26:22.370 --> 00:26:24.610 Connecticut Agricultural Experiment Station

00:26:24.610 --> 00:26:27.010 discovered established breeding populations

00:26:27.010 --> 00:26:31.410 in Fairfield County in 2018 and Haven County in 2019,

00:26:31.410 --> 00:26:33.220 meaning that the insects aren't transients

00:26:33.220 --> 00:26:35.120 that they're established in our State.

00:26:37.600 --> 00:26:42.270 I mentioned foodborne Vibrio or Vibrio briefly earlier.

00:26:42.270 --> 00:26:45.233 So Vibrio bacteria live in warm coastal waters,

00:26:46.700 --> 00:26:49.560 especially in lower salinity estuaries.

00:26:49.560 --> 00:26:52.320 Humans can become infected through two routes.

00:26:52.320 --> 00:26:57.320 One is by walking through water

00:26:57.380 --> 00:26:58.770 that carries the Vibrio bacteria

00:26:58.770 --> 00:27:00.950 especially with an exposed wound.

00:27:00.950 --> 00:27:03.770 But the second and the focus of this indicator

00:27:03.770 --> 00:27:05.893 is by eating contaminated seafood,

00:27:06.860 --> 00:27:09.057 especially shellfish that's where (indistinct).

00:27:10.400 --> 00:27:12.600 And you can see from the figure on the left

00:27:12.600 --> 00:27:15.190 the annual incidents of confirmed cases

00:27:15.190 --> 00:27:18.033 of vibrio infections has increased.

00:27:20.400 --> 00:27:22.540 Foodborne infections from Vibrio

00:27:22.540 --> 00:27:25.870 typically result in symptoms, including abdominal cramps

00:27:25.870 --> 00:27:30.190 and nausea, diarrhea, fever and chills.

00:27:30.190 --> 00:27:32.420 Most of them aren't significant,

00:27:32.420 --> 00:27:35.300 many people don't seek medical care

00:27:35.300 --> 00:27:37.450 so actually the numbers are under reported.

00:27:40.190 --> 00:27:42.920 But foodborne vibrio infections can be serious

00:27:42.920 --> 00:27:46.270 especially if they're caused by one particular species

00:27:46.270 --> 00:27:49.740 Vibrio vulnificus which causes 95%

00:27:49.740 --> 00:27:53.070 of all seafood related mortality in the United States.

00:27:53.070 --> 00:27:54.820 But fortunately, these kinds

00:27:54.820 --> 00:27:56.983 of infections are very rare in Connecticut.

00:27:58.550 --> 00:28:03.550 And you'll see on the right sea surface temperature

00:28:03.770 --> 00:28:05.040 at one site in Connecticut,

00:28:05.040 --> 00:28:08.460 on Niantic Bay during the summertime, over the same period

00:28:09.701 --> 00:28:12.273 as we're reporting the Vibrio infections.

00:28:15.720 --> 00:28:17.710 The bacteria grow best in warm water.

00:28:17.710 --> 00:28:20.430 And so you can see the strong association

00:28:20.430 --> 00:28:23.100 between higher sea surface temperature, the right

00:28:23.100 --> 00:28:25.903 and the greater vibrio abundance on the left.

00:28:27.380 --> 00:28:29.070 And already it's been observed

00:28:29.070 --> 00:28:32.210 that these infections increase during heat waves

00:28:32.210 --> 00:28:35.370 when this has been studied around the world.

00:28:35.370 --> 00:28:40.370 And this is one of the quite clear indications

00:28:41.890 --> 00:28:46.150 that we see in Connecticut so far of an association

00:28:46.150 --> 00:28:48.993 of climate change and health impacts.

00:28:53.630 --> 00:28:54.993 What can we do here?

00:28:56.220 --> 00:28:59.250 In terms of policies and programs,

00:28:59.250 --> 00:29:02.470 I'll note also on this point that the governor's council

00:29:02.470 --> 00:29:05.590 on climate change has issued its report recently

00:29:05.590 --> 00:29:08.760 that includes actions around public health and safety

00:29:08.760 --> 00:29:12.337 and that a number of our recommendations in our report

00:29:12.337 --> 00:29:15.420 and in this presentation are quite similar

00:29:15.420 --> 00:29:18.030 to those that are in the GC3 report

00:29:18.030 --> 00:29:22.713 and that's including in this instance.

00:29:23.870 --> 00:29:26.637 So we recommend surveillance of vectors

00:29:26.637 --> 00:29:28.900 and the sea doesn't take associated disease

00:29:28.900 --> 00:29:30.150 that is happening through

00:29:30.150 --> 00:29:31.600 the Connecticut Agricultural Station.

00:29:31.600 --> 00:29:34.160 And it's really important, particularly

00:29:34.160 --> 00:29:38.460 as they're emerging vectors and diseases in our area.

00:29:38.460 --> 00:29:41.950 And so relatedly, it's important to continue

00:29:41.950 --> 00:29:46.950 with public education on these emerging vectors in diseases

00:29:46.960 --> 00:29:49.543 and around prevention, best practices.

00:29:50.420 --> 00:29:54.400 And third and this is directly from the GC3 report,

00:29:54.400 --> 00:29:56.530 to develop vector-borne disease prevention

00:29:56.530 --> 00:29:59.650 and management guidelines for schools, outdoor recreation

00:29:59.650 --> 00:30:04.250 and homes to provide best practices at those sites

00:30:04.250 --> 00:30:07.763 for reducing infections or reducing disease.

00:30:09.938 --> 00:30:12.270 And then for personal action,

00:30:12.270 --> 00:30:15.770 you can create a tick safe zone in your yard.

00:30:15.770 --> 00:30:18.180 Many of us know already about best practices

00:30:18.180 --> 00:30:21.140 around tick prevention of wearing long pants.

00:30:21.140 --> 00:30:25.610 Using the insect repellent, doing a tick check.

00:30:25.610 --> 00:30:29.660 And then we want to keep mosquitoes out

00:30:29.660 --> 00:30:30.850 with high quality housing,

00:30:30.850 --> 00:30:33.453 mosquito tight screens and windows and doors.

00:30:35.030 --> 00:30:38.900 And there are some helpful resources, including

00:30:38.900 --> 00:30:42.350 from the Connecticut Agricultural Experiment Stations

00:30:42.350 --> 00:30:45.253 and I've won friends won the tick management handbook.

00:30:48.950 --> 00:30:53.950 Finally, we'll discuss the final domain of air quality.

00:30:56.037 --> 00:30:58.963 As you may be aware, Connecticut has issues

00:31:00.210 --> 00:31:01.840 with ground-level ozone pollution.

00:31:01.840 --> 00:31:05.210 And in fact, the American Lung Association gave each County

00:31:05.210 --> 00:31:08.713 an F grade for ozone pollution in its 2019 report.

00:31:10.020 --> 00:31:12.730 And similarly, we found that while the number

00:31:12.730 --> 00:31:15.490 of air quality days has decreased over time,

00:31:15.490 --> 00:31:18.420 so you can see the downward trend of those bar graphs

00:31:18.420 --> 00:31:21.850 for each County that more needs to be done

00:31:21.850 --> 00:31:23.253 to protect human health.

00:31:24.206 --> 00:31:26.700 So ground-level ozone is the result largely

00:31:26.700 --> 00:31:28.800 burning fossil fuels whether in our vehicles

00:31:28.800 --> 00:31:30.980 or in power plants.

00:31:30.980 --> 00:31:33.260 And so importantly, this is where we can see

00:31:33.260 --> 00:31:35.783 strong health co-benefits of climate actions.

00:31:39.390 --> 00:31:41.450 When we switched to clean energy sources

00:31:41.450 --> 00:31:44.070 or make our active transportation safer and easier,

00:31:44.070 --> 00:31:45.700 then we're also reducing

00:31:45.700 --> 00:31:48.453 these local drivers of air pollution.

00:31:50.820 --> 00:31:55.060 It's worth noting as well that much of our air pollution

00:31:55.060 --> 00:31:57.633 does come from States to our West,

00:31:58.500 --> 00:32:00.010 and so this points the need

00:32:00.010 --> 00:32:02.740 for a strong federal and regional action

00:32:02.740 --> 00:32:05.013 to address climate change and air pollution.

00:32:07.670 --> 00:32:10.630 Many of us are familiar with ground-level ozone or smog,

00:32:10.630 --> 00:32:13.130 but it's worth a reminder about the health effects.

00:32:13.130 --> 00:32:15.640 So it's a strong lung irritant.

00:32:15.640 --> 00:32:18.530 It can cause the shortness of breath or coughing,

00:32:18.530 --> 00:32:20.497 but it can cause more serious consequences

00:32:20.497 --> 00:32:23.700 and it can aggravate lung diseases like asthma,

00:32:23.700 --> 00:32:26.171 emphysema and chronic bronchitis.

00:32:26.171 --> 00:32:29.680 It can increase the frequencies of asthma attacks

00:32:29.680 --> 00:32:31.150 and it may contribute to

00:32:31.150 --> 00:32:34.023 the initial development of asthma in children.

00:32:34.970 --> 00:32:37.890 And it's worth noting that nationally asthma

00:32:37.890 --> 00:32:40.040 is the leading cause of school absenteeism.

00:32:41.380 --> 00:32:43.150 And as I said before, the combination

00:32:43.150 --> 00:32:46.900 of air quality, air quality alert days,

00:32:46.900 --> 00:32:48.650 poor quality days and high heat days

00:32:48.650 --> 00:32:50.533 is particularly dangerous to health.

00:32:52.270 --> 00:32:54.620 Looking forward under climate change

00:32:54.620 --> 00:32:57.800 under further climate change,

00:32:57.800 --> 00:32:59.900 there's concern that past progress

00:32:59.900 --> 00:33:02.440 on reducing ground-level ozone pollution is likely

00:33:02.440 --> 00:33:05.370 to be counteracted by something called the climate penalty,

00:33:05.370 --> 00:33:08.430 which is that higher temperatures and other climatic changes

00:33:08.430 --> 00:33:12.640 are expected to bring about higher ground

00:33:12.640 --> 00:33:13.840 level ozone concentrations,

00:33:13.840 --> 00:33:15.993 especially in already polluted areas.

00:33:16.960 --> 00:33:19.530 However, to underscore a point that we've made

00:33:19.530 --> 00:33:21.560 throughout the presentation, the size of that

00:33:21.560 --> 00:33:25.050 climate penalty depends on our action on climate change now.

00:33:25.050 --> 00:33:28.260 So when we look at a moderate emissions pathway,

00:33:28.260 --> 00:33:32.650 so taking more action on climate change compared

00:33:32.650 --> 00:33:35.870 to a business as usual, that could prevent approximately

00:33:35.870 --> 00:33:39.400 360 deaths per year by 2090 in the Northeast

00:33:40.290 --> 00:33:41.633 according to one study.

00:33:46.000 --> 00:33:49.621 For the final indicator that I'll cover here,

00:33:49.621 --> 00:33:52.160 this is on aeroallergens.

00:33:52.160 --> 00:33:55.140 We use data from a monitoring seitan in Waterbury

00:33:56.110 --> 00:34:01.060 that measured outdoor mold and grass pollen,

00:34:01.060 --> 00:34:02.793 tree pollen, and weed pollen.

00:34:03.970 --> 00:34:07.260 And we only found one significant trends

00:34:07.260 --> 00:34:10.460 and that was that since 2007,

00:34:10.460 --> 00:34:12.250 the percent of measure days with higher

00:34:12.250 --> 00:34:15.423 very high outdoor mold concentrations has increased.

00:34:17.370 --> 00:34:20.060 However, there are some national indications

00:34:20.060 --> 00:34:22.650 about changes in pollen exposure

00:34:22.650 --> 00:34:24.900 that might be associated with climate change.

00:34:26.220 --> 00:34:30.460 And this is due to increased atmospheric CO2 concentrations.

00:34:30.460 --> 00:34:35.460 and one more temperatures that can cause longer seasons

00:34:35.910 --> 00:34:37.390 for pollen production.

00:34:37.390 --> 00:34:39.510 It can change the geographic distribution

00:34:39.510 --> 00:34:43.410 upon producing plants, and it can increase pollen,

00:34:43.410 --> 00:34:46.540 the actual pollen production per year

00:34:46.540 --> 00:34:50.170 and that this can overall, we may see

00:34:52.343 --> 00:34:55.403 more such pollen and more allergic reactions

00:34:57.080 --> 00:34:58.830 in the future under climate change.

00:35:03.200 --> 00:35:04.330 What can we do?

00:35:04.330 --> 00:35:07.970 I'm focusing here on actions that are

00:35:07.970 --> 00:35:10.660 making most use of addressing of reaping

00:35:10.660 --> 00:35:13.120 the health co-benefits of climate action.

00:35:13.120 --> 00:35:16.160 So first, Connecticut is considering

00:35:16.160 --> 00:35:20.780 a goal of 100% zero carbon electricity supply by 2040.

00:35:20.780 --> 00:35:23.440 And we think that that is a strong way

00:35:23.440 --> 00:35:28.440 to also address local to gain that those local

00:35:28.950 --> 00:35:32.003 health co-benefits of climate action.

00:35:33.510 --> 00:35:35.320 Another is to electrify

00:35:35.320 --> 00:35:36.990 the transportation and heating sectors.

00:35:36.990 --> 00:35:39.023 That's certainly easier said than done,

00:35:39.860 --> 00:35:42.450 but they come with real health co-benefits.

00:35:42.450 --> 00:35:45.190 In particular, you can think about electrifying

00:35:45.190 --> 00:35:49.070 heavy duty municipal buses or school buses,

00:35:49.070 --> 00:35:50.710 and how that can really improve

00:35:50.710 --> 00:35:53.213 the local air quality in a given location.

00:35:54.420 --> 00:35:56.600 Improving active transportation options

00:35:56.600 --> 00:35:58.420 is reducing carbon emissions,

00:35:58.420 --> 00:36:01.270 but it's also increasing physical activity

00:36:01.270 --> 00:36:05.720 and brings similar co-benefits from that greater activity.

00:36:09.980 --> 00:36:11.740 And again, supporting strong federal action

00:36:11.740 --> 00:36:14.130 to limit interstate pollution recognizing

00:36:14.130 --> 00:36:16.720 that our action alone in Connecticut

00:36:17.690 --> 00:36:22.610 doesn't completely solve our air pollution concerns.

00:36:22.610 --> 00:36:26.410 For personal action, you can sign up for an energy audit.

00:36:26.410 --> 00:36:29.070 And in the fall through with energy efficiency measures

00:36:29.070 --> 00:36:33.980 and weatherization, many supported by Connecticut policies

00:36:33.980 --> 00:36:36.490 can opt into renewable electricity,

00:36:36.490 --> 00:36:38.580 utilize active transportation

00:36:38.580 --> 00:36:42.030 and electrify your homes with heat pumps

00:36:42.030 --> 00:36:45.103 and your vehicles by switching to EVs.

00:36:49.410 --> 00:36:51.410 And finally, I'll wrap up with some

00:36:51.410 --> 00:36:55.633 of our large overarching report recommendations.

00:36:56.680 --> 00:37:00.000 The first is above all swift action to reduce

00:37:00.000 --> 00:37:02.590 and eliminate carbon emissions.

00:37:02.590 --> 00:37:05.480 Connecticut is committed to reducing greenhouse gases

00:37:05.480 --> 00:37:10.480 by 245% below 2001 levels by 2030 and 80% below by 2050.

00:37:14.720 --> 00:37:16.650 So we need to assure that this is accomplished

00:37:16.650 --> 00:37:18.240 and that Connecticut goes further

00:37:18.240 --> 00:37:21.143 toward achieving zero carbon future.

00:37:23.050 --> 00:37:25.060 Additionally, we need to continue

00:37:25.060 --> 00:37:28.230 to monitor these climate conditions

00:37:28.230 --> 00:37:32.160 and project trends in Connecticut, understanding how

00:37:32.160 --> 00:37:34.020 climate change is affecting our health

00:37:34.020 --> 00:37:35.933 and how we can respond accordingly,

00:37:36.790 --> 00:37:40.390 and provide this information to local decision-makers.

00:37:40.390 --> 00:37:42.100 Second, we can invest

00:37:42.100 --> 00:37:44.430 in the social determinants of health.

00:37:44.430 --> 00:37:47.800 So social factors like housing and education

00:37:47.800 --> 00:37:50.930 and employment are major drivers of population health.

00:37:50.930 --> 00:37:53.390 And we think that they're important possible synergies

00:37:53.390 --> 00:37:56.650 by taking action on climate change

00:37:56.650 --> 00:38:00.410 both mitigation and adaptation in ways that also invest

00:38:00.410 --> 00:38:01.950 in the social determinants of health.

00:38:01.950 --> 00:38:03.640 And you can think about that

00:38:03.640 --> 00:38:06.920 in terms of housing and neighborhood design,

00:38:06.920 --> 00:38:09.683 our food choices and our transportation options.

00:38:15.568 --> 00:38:17.870 We pointed principles of environmental justice

00:38:17.870 --> 00:38:18.943 to say that addressing climate change

00:38:18.943 --> 00:38:21.960 and the health inequities requires confronting

00:38:21.960 --> 00:38:24.560 their root causes by challenging historic

00:38:24.560 --> 00:38:27.470 and systemic burdens faced by low-income communities

00:38:27.470 --> 00:38:28.980 and communities of color.

00:38:28.980 --> 00:38:31.370 And that includes environmental pollution,

00:38:31.370 --> 00:38:33.440 income inequality, racism

00:38:33.440 --> 00:38:36.570 and inequitable access to power and resources.

00:38:36.570 --> 00:38:39.360 And so solutions need to be addressing

00:38:39.360 --> 00:38:43.853 these deeper drivers to be ultimately effective.

00:38:46.760 --> 00:38:48.290 We recommend, as I've mentioned before,

00:38:48.290 --> 00:38:52.150 pursuing actions that integrate climate mitigation

00:38:52.150 --> 00:38:55.340 and climate adaptation with immediate health co-benefits

00:38:55.340 --> 00:38:58.200 to fully utilize the benefits

00:38:58.200 --> 00:39:01.483 that can be achieved through policy action.

00:39:05.480 --> 00:39:08.410 We encourage building the capacity of health professionals

00:39:08.410 --> 00:39:11.990 and decision-makers to address climate and health

00:39:11.990 --> 00:39:14.727 knowing that many professionals weren't trained

00:39:14.727 --> 00:39:16.310 and many health professionals weren't trained

00:39:16.310 --> 00:39:19.430 in climate change, many other decision-makers

00:39:19.430 --> 00:39:22.070 weren't trained in climate change or health, perhaps.

00:39:22.070 --> 00:39:27.070 And that that kind of this knowledge gap is important

00:39:28.280 --> 00:39:31.053 for addressing these issues in the future.

00:39:35.200 --> 00:39:37.470 We recommend incorporating climate change

00:39:37.470 --> 00:39:40.420 into decision-making across sectors.

00:39:40.420 --> 00:39:43.623 So of course climate change is not a siloed issue.

00:39:44.465 --> 00:39:48.610 Its causes and its solutions go across all areas

00:39:48.610 --> 00:39:51.510 of government and a society, and it's important

00:39:51.510 --> 00:39:56.510 to take a intersectoral approach toward bringing solutions.

00:40:01.270 --> 00:40:06.270 And finally, we encourage incorporating public health

00:40:06.600 --> 00:40:09.123 into climate change decision-making.

00:40:10.420 --> 00:40:12.450 There's a concept in public health

00:40:12.450 --> 00:40:14.100 called a health and all policies approach

00:40:14.100 --> 00:40:17.860 which is that public health should be at the table

00:40:17.860 --> 00:40:22.860 in making decisions from transportation to urban planning

00:40:24.290 --> 00:40:26.960 because these importantly affect health as well.

00:40:26.960 --> 00:40:30.320 And we believe that this is important

00:40:30.320 --> 00:40:31.500 in addressing climate change,

00:40:31.500 --> 00:40:35.070 particularly on mitigation to make sure

00:40:35.070 --> 00:40:36.680 that these health benefits

00:40:36.680 --> 00:40:41.680 and health harms are fully addressed.

00:40:45.490 --> 00:40:50.490 That wraps up this speed through our report.

00:40:50.490 --> 00:40:52.810 Again, I encourage you to download the report

00:40:53.930 --> 00:40:56.590 or sign up for our newsletter on our website

00:40:56.590 --> 00:40:59.630 and I look forward to hearing

00:40:59.630 --> 00:41:02.373 your questions coming up, thanks again.

00:41:09.220 --> 00:41:12.203 All right, Myra, do you wanna-

00:41:13.070 --> 00:41:15.980 - Yeah, thanks so much for that, Laura.

00:41:15.980 --> 00:41:19.480 I'm gonna just do a reverse chronological order

00:41:19.480 --> 00:41:21.940 if that's okay as I scrolled through these.

00:41:21.940 --> 00:41:25.940 So it looks like we just had a question come in from Rachel.

00:41:25.940 --> 00:41:28.270 I'm wondering if you looked at any indicators

00:41:28.270 --> 00:41:32.000 related to agriculture or the food industry

00:41:32.000 --> 00:41:33.710 especially given the health co-benefits

00:41:33.710 --> 00:41:34.973 of plant based diets.

00:41:36.830 --> 00:41:39.140 - Good question, so the report was focused

00:41:39.140 --> 00:41:43.330 on climate impacts in particular.

00:41:43.330 --> 00:41:48.330 So we weren't looking explicitly at mitigation solutions.

00:41:50.520 --> 00:41:51.560 So we didn't look at,

00:41:51.560 --> 00:41:55.490 there wasn't something specifically on food

00:41:56.500 --> 00:41:58.910 though it's addressed sort of indirectly

00:41:58.910 --> 00:42:00.593 in a number of other indicators.

00:42:03.580 --> 00:42:05.450 - All right thank you. - And I just say Rob

00:42:05.450 --> 00:42:09.360 again as coauthor please feel free to jump in anytime.

00:42:15.400 --> 00:42:16.690 - All right, thank you, Laura.

00:42:16.690 --> 00:42:20.443 We have another question from Ursula.

00:42:22.500 --> 00:42:25.470 Are businesses mandated to recycle

00:42:25.470 --> 00:42:28.870 or invest in efficient energy systems?

00:42:28.870 --> 00:42:30.410 It looks like business or hospitals

00:42:30.410 --> 00:42:32.310 if I'm reading the question correctly.

00:42:33.460 --> 00:42:36.040 - [Ursula] Yes, thank you, that's what I meant.

00:42:36.040 --> 00:42:36.903 - [Myra] Thank you, Ursula.

00:42:37.767 --> 00:42:39.193 - That's a good question.

00:42:40.039 --> 00:42:40.990 I don't know the answer.

00:42:40.990 --> 00:42:43.670 I think Rob, maybe you know this

00:42:43.670 --> 00:42:45.120 if recycling is mandated.

00:42:45.120 --> 00:42:47.100 It may be at a municipal level

00:42:47.100 --> 00:42:49.050 that those kinds of decisions are made.

00:42:53.180 --> 00:42:55.580 Rob, do you know more about that in Connecticut?

00:42:59.460 --> 00:43:01.850 - All I can say is that there,

00:43:01.850 --> 00:43:05.713 if there aren't strong mandates, if there are any.

00:43:07.100 --> 00:43:11.100 Yeah, so essentially the answer is no.

00:43:11.100 --> 00:43:14.210 - Yeah, but it is worth noting that we have a colleague

00:43:14.210 --> 00:43:16.470 at the Center on Climate Change and Health Study,

00:43:16.470 --> 00:43:19.530 Sherman who does like world-renowned research

00:43:19.530 --> 00:43:21.740 on reducing unhealthcare sustainability

00:43:21.740 --> 00:43:25.260 and reducing the impact of the healthcare sector.

00:43:25.260 --> 00:43:30.260 And so there's really promising options in hospitals

00:43:31.820 --> 00:43:35.780 and others to reduce their consumption of plastics

00:43:39.490 --> 00:43:41.940 and other kinds of materials.

00:43:41.940 --> 00:43:44.710 - [Ursula] Yes, I don't think it's that regulation.

00:43:44.710 --> 00:43:46.830 I don't think we're gonna get anywhere.

00:43:46.830 --> 00:43:49.410 I finished the certificate program

00:43:49.410 --> 00:43:52.520 and I'm trying to introduce concepts to my colleagues

00:43:52.520 --> 00:43:57.280 and without regulation (laughing)

00:43:57.280 --> 00:43:59.703 they need someone from the top down like telling them

00:43:59.703 --> 00:44:01.740 they have to do this or they're gonna get fined.

00:44:01.740 --> 00:44:04.410 It's really sad but I'm still clamoring

00:44:04.410 --> 00:44:06.800 a way to make some impact (laughing).

00:44:06.800 --> 00:44:07.700 - Good, thank you.

00:44:11.540 --> 00:44:16.130 - Great, I see one from Sandy, is Connecticut

00:44:16.130 --> 00:44:19.223 considering more enticing EV credits in the future?

00:44:23.200 --> 00:44:28.027 - I hope so, but I don't know specifics.

00:44:31.550 --> 00:44:34.670 - Yeah, I haven't seen anything about that.

00:44:34.670 --> 00:44:36.560 - But Connecticut released a report

00:44:36.560 --> 00:44:38.490 an EV roadmap last year

00:44:38.490 --> 00:44:42.200 that set out a number of actions for the State to take.

00:44:42.200 --> 00:44:44.920 And it's also worth noting that Connecticut

00:44:46.170 --> 00:44:48.730 signed onto the transportation climate initiative

00:44:48.730 --> 00:44:52.970 which is the regional program to reduce emissions

00:44:52.970 --> 00:44:54.150 from the transportation sector.

00:44:54.150 --> 00:44:57.423 So if that is passed through the Connecticut legislature,

00:44:59.720 --> 00:45:03.890 it would produce revenue that could be used

00:45:03.890 --> 00:45:06.453 toward decarbonizing transportation.

00:45:08.300 --> 00:45:11.093 - Yeah, I'll just add to the EV issue.

00:45:12.000 --> 00:45:14.630 So there's a whole range of issues in terms

00:45:14.630 --> 00:45:19.630 of converting to the transportation sector to EVs,

00:45:19.740 --> 00:45:21.280 which is of course critical.

00:45:21.280 --> 00:45:24.283 So in addition to making the EV affordable,

00:45:27.464 --> 00:45:29.750 building the whole network of charging stations

00:45:29.750 --> 00:45:31.640 which I think maybe that's one of the things

00:45:31.640 --> 00:45:32.800 you were referring to learn

00:45:32.800 --> 00:45:35.170 that Connecticut is paying attention to.

00:45:35.170 --> 00:45:40.170 And then there's the technology is improving all the time

00:45:41.390 --> 00:45:44.720 for the fast charging occurs

00:45:44.720 --> 00:45:46.930 which is another critical factor.

00:45:46.930 --> 00:45:48.670 Like you don't wanna have to wait

00:45:48.670 --> 00:45:51.680 for six hours in the middle of your trip

00:45:51.680 --> 00:45:54.783 to get your car fully charged again.

00:45:55.860 --> 00:45:58.053 And that's also been improving.

00:45:59.430 --> 00:46:01.523 And then one more of course is the,

00:46:03.450 --> 00:46:06.800 how many miles you could travel on one charge

00:46:07.850 --> 00:46:11.460 and that's been improving as well

00:46:11.460 --> 00:46:16.460 where Tesla now has a car that's not yet really affordable.

00:46:17.080 --> 00:46:21.723 It's $75,000, but it has a range of 400 miles.

00:46:23.400 --> 00:46:25.460 And all of these things go together

00:46:25.460 --> 00:46:30.313 because as the infrastructure improves, et cetera,

00:46:31.650 --> 00:46:35.650 then as there's more demand for EVs

00:46:35.650 --> 00:46:38.020 then the price will start to come down

00:46:38.020 --> 00:46:40.133 to the economy of scale.

00:46:44.600 --> 00:46:45.827 - Exactly, thank you.

00:46:49.620 --> 00:46:51.830 Any more credits will help though, right?

00:46:51.830 --> 00:46:54.613 For us to move in that direction.

00:46:54.613 --> 00:46:55.690 - Yeah - Yeah, absolutely.

00:46:55.690 --> 00:46:56.740 - I really love that.

00:46:59.210 --> 00:47:02.513 - There's an early question here from Brenda,

00:47:04.350 --> 00:47:06.800 is there a way to categorize severe weather events

00:47:06.800 --> 00:47:10.010 such as climate change disasters or warming disasters?

00:47:10.010 --> 00:47:13.447 So it seems like labeling, how do we do that

00:47:14.435 --> 00:47:16.268 or how can we do that?

00:47:22.485 --> 00:47:27.485 - I don't know if I quite understand the question

00:47:27.578 --> 00:47:30.080 of how do we categorize,

00:47:30.080 --> 00:47:33.639 Brenda, do you wanna specify that?

00:47:33.639 --> 00:47:34.920 - Oh okay. - Go ahead.

00:47:34.920 --> 00:47:37.077 - [Brenda] I was just thinking more about the (indistinct).

00:47:38.725 --> 00:47:41.475 (Brenda mumbles)

00:47:45.520 --> 00:47:49.160 You know these disasters, but I know

00:47:49.160 --> 00:47:52.800 that it's probably a challenge to try to figure out

00:47:52.800 --> 00:47:57.800 how to separate or define how you can go about that.

00:47:57.950 --> 00:48:01.560 But for me, it's just about people are onboarded

00:48:01.560 --> 00:48:06.370 to the fact that these severe weather events are not common

00:48:06.370 --> 00:48:08.860 because the weather is in front of you.

00:48:08.860 --> 00:48:13.860 - Yeah, no, I think it's a really great point.

00:48:14.350 --> 00:48:16.470 I think we also have kind of a shifting baseline

00:48:16.470 --> 00:48:19.100 of accepting what seems normal.

00:48:19.100 --> 00:48:20.760 When if you look back in time,

00:48:20.760 --> 00:48:23.400 it's certainly quite extraordinary.

00:48:23.400 --> 00:48:28.400 And there are studies that are looking at,

00:48:30.090 --> 00:48:32.570 that look at the the climate contribution

00:48:32.570 --> 00:48:35.410 for a given large scale event,

00:48:35.410 --> 00:48:37.620 but generally that kind of connection

00:48:37.620 --> 00:48:39.963 for each individual one is difficult to do.

00:48:41.560 --> 00:48:45.320 I'll mention one interesting campaign

00:48:45.320 --> 00:48:48.410 that a number of groups are putting forward

00:48:48.410 --> 00:48:51.654 which is to name heat waves.

00:48:51.654 --> 00:48:55.630 So in the way that we name hurricanes

00:48:55.630 --> 00:48:57.510 giving a name to heat waves

00:48:57.510 --> 00:49:00.370 to show how they're significant

00:49:01.600 --> 00:49:04.343 and that they are becoming more prevalent.

00:49:07.650 --> 00:49:09.450 Rob do you wanna add anything there?

00:49:12.060 --> 00:49:13.980 - No, I was gonna mention the heat waves too.

00:49:13.980 --> 00:49:17.890 I think that would be a nice step

00:49:17.890 --> 00:49:20.310 in the right direction to kind of emphasis,

00:49:20.310 --> 00:49:21.560 it would really help to emphasize

00:49:21.560 --> 00:49:25.810 their importance more if they gave them a name.

00:49:25.810 --> 00:49:26.643 - Yeah.

00:49:29.160 --> 00:49:30.760 - Great, thank you both.

00:49:30.760 --> 00:49:33.870 We have a question from Matthew.

00:49:33.870 --> 00:49:37.653 How can we find similar reports from other States?

00:49:39.460 --> 00:49:41.000 - Well, it's one of the reasons that

00:49:41.000 --> 00:49:44.030 we gave this webinar was to encourage others

00:49:44.030 --> 00:49:45.683 to produce similar reports.

00:49:50.340 --> 00:49:52.840 I'll mention that there are a number of cities and States

00:49:52.840 --> 00:49:53.980 around the country that are funded

00:49:53.980 --> 00:49:57.840 through the CDC to have a climate

00:49:57.840 --> 00:49:59.570 and health program in their health department.

00:49:59.570 --> 00:50:04.570 And through that, they've created reports looking at

00:50:04.660 --> 00:50:07.560 climate impacts and projecting impacts in the future.

00:50:07.560 --> 00:50:10.200 So if you live in one of those States,

00:50:10.200 --> 00:50:13.640 if you look up something like CDC climate and health program

00:50:14.870 --> 00:50:16.323 you can see reports there.

00:50:20.430 --> 00:50:22.793 Wisconsin, I'll mention to Wisconsin,

00:50:24.090 --> 00:50:27.820 some of our extended colleagues in Wisconsin

00:50:27.820 --> 00:50:30.350 just put out a really great report for their State.

00:50:30.350 --> 00:50:33.140 And it's especially focused on inspiring

00:50:33.140 --> 00:50:36.303 health professionals to take action on climate change.

00:50:37.590 --> 00:50:40.320 - Yeah, I think as far as we know

00:50:40.320 --> 00:50:44.640 there aren't other reports, do you agree with that, Laura?

00:50:44.640 --> 00:50:48.663 - I think using this indicator approach is unique.

00:50:53.200 --> 00:50:56.180 - [Jacy] I had a followup question, Jacy McGaw-Cesaire here.

00:50:56.180 --> 00:50:59.100 I wanted to on that note know

00:50:59.100 --> 00:51:01.310 if there was a kind of scorecard

00:51:02.490 --> 00:51:04.330 in the process or the pipeline

00:51:04.330 --> 00:51:08.930 to the compare States responses to climate change

00:51:08.930 --> 00:51:13.293 and health, and maybe having like an NCD

00:51:15.060 --> 00:51:17.463 but for States to compare that.

00:51:19.136 --> 00:51:20.136 - It's a great idea.

00:51:21.867 --> 00:51:25.287 I don't know of any existing work on that.

00:51:28.060 --> 00:51:29.540 It's probably also worth mentioning

00:51:29.540 --> 00:51:33.100 that one inspiration for this report is the Lancet countdown

00:51:33.100 --> 00:51:34.190 on health and climate change

00:51:34.190 --> 00:51:37.477 which is a global effort to assess climate impacts

00:51:37.477 --> 00:51:40.750 and climate action from a health perspective.

00:51:40.750 --> 00:51:45.430 And that does some of that tracking.

00:51:45.430 --> 00:51:48.470 Like one of their indicators I think is looking at countries

00:51:48.470 --> 00:51:51.760 that have a health adaptation, climate adaptation plan.

00:51:51.760 --> 00:51:55.130 So you can imagine doing something like that in the US too.

00:51:55.130 --> 00:51:56.580 I think that's a great point.

00:52:02.640 --> 00:52:04.983 - Great, thanks Laura, let's see.

00:52:05.971 --> 00:52:06.970 I have a question from Susan.

00:52:06.970 --> 00:52:09.970 Are there any municipalities or towns that are doing

00:52:09.970 --> 00:52:11.230 a better job incorporating

00:52:11.230 --> 00:52:12.983 these concerns into their planning?

00:52:14.010 --> 00:52:15.900 - Brings up a great program to reference

00:52:15.900 --> 00:52:17.223 which is sustainable CT.

00:52:18.360 --> 00:52:21.460 And so that's a voluntary program where municipalities

00:52:21.460 --> 00:52:25.940 can opt to join in and then become certified

00:52:25.940 --> 00:52:28.643 by taking on different sustainability actions.

00:52:29.560 --> 00:52:32.580 And those have a whole different range.

00:52:32.580 --> 00:52:35.740 Sustainability actions is not just about climate change

00:52:35.740 --> 00:52:40.740 and there are some that relate to climate and health

00:52:41.960 --> 00:52:45.020 but we would have actually been chatting

00:52:45.020 --> 00:52:47.700 with them a little bit about how that could be built out

00:52:47.700 --> 00:52:51.210 to make sure that municipalities are really acting

00:52:51.210 --> 00:52:53.193 on these issues of climate and health.

00:52:54.290 --> 00:52:57.793 Oh, great and Myra put in a link to the organizations.

00:52:59.880 --> 00:53:03.130 - A question here from Jeremy specific

00:53:03.130 --> 00:53:06.910 to the Lyme disease indicator,

00:53:06.910 --> 00:53:09.640 were any factors considered into why the total number

00:53:09.640 --> 00:53:12.033 of Lyme disease cases have been decreasing?

00:53:16.300 --> 00:53:17.496 - Rob do you wanna grab? - I can do that.

00:53:17.496 --> 00:53:19.200 - Yeah, please. - Yeah.

00:53:19.200 --> 00:53:23.670 So well first I'll say that we then try

00:53:23.670 --> 00:53:28.350 to rigorously figure that out

00:53:28.350 --> 00:53:30.800 but we have some informed guesses

00:53:30.800 --> 00:53:33.930 about why there's actually been a decrease in Lyme disease.

00:53:33.930 --> 00:53:36.660 And the main guess is that it's because,

00:53:36.660 --> 00:53:38.890 over the last decade or so, there's been a lot

00:53:38.890 --> 00:53:42.200 more awareness about Lyme disease in the State

00:53:43.130 --> 00:53:45.350 and about the protective measures

00:53:45.350 --> 00:53:50.350 that people could take to avoid infection.

00:53:50.690 --> 00:53:53.203 So I think that's our best guess about why.

00:53:54.940 --> 00:53:58.233 That was one of the initially surprising trends.

00:53:59.170 --> 00:54:01.650 We fully expected to see an increase in Lyme disease,

00:54:01.650 --> 00:54:03.700 but you have to go with the data

00:54:04.760 --> 00:54:06.780 and that's what we saw.

00:54:06.780 --> 00:54:09.790 And I don't think it's an artifact in any way

00:54:09.790 --> 00:54:14.790 because if anything, there would be an increase in actually,

00:54:23.190 --> 00:54:27.360 not missing Lyme disease cases as we proceed

00:54:27.360 --> 00:54:29.160 in time as opposed to the opposite.

00:54:29.160 --> 00:54:31.720 There's no reason why there'd be more cases

00:54:31.720 --> 00:54:34.993 missed in recent years than in former years.

00:54:40.200 --> 00:54:42.130 - Great, thanks, Rob.

00:54:42.130 --> 00:54:44.790 We might have time for one or two more questions.

00:54:44.790 --> 00:54:48.683 I see one here from from Mike Pascucilla,

00:54:49.840 --> 00:54:51.870 can you discuss the New England agreement

00:54:51.870 --> 00:54:53.520 with other States, for example,

00:54:53.520 --> 00:54:56.563 Rhode Island is one of the leaders in the North-east?

00:55:00.850 --> 00:55:02.300 - Mike, do you wanna...

00:55:02.300 --> 00:55:05.310 I'm not totally sure what you mean by that.

00:55:05.310 --> 00:55:06.433 Do you wanna specify?

00:55:12.130 --> 00:55:13.080 Oop you're on mute.

00:55:24.090 --> 00:55:28.790 - Okay, of course, Dr Bozzi excellent report.

00:55:28.790 --> 00:55:31.110 As I put in my message,

00:55:31.110 --> 00:55:32.840 it's not just research it's reality.

00:55:32.840 --> 00:55:35.110 What I like about this report is

00:55:36.300 --> 00:55:39.340 it has these indicators, things that people can relate to.

00:55:39.340 --> 00:55:41.490 I know my colleagues and I have used it

00:55:41.490 --> 00:55:44.230 and we pushed it out to our community.

00:55:44.230 --> 00:55:46.927 We actually got some feedback from few of our community,

00:55:46.927 --> 00:55:48.960 so it's a great report.

00:55:48.960 --> 00:55:52.320 And as far as I know, I do not think there is

00:55:52.320 --> 00:55:55.390 another State that has done something like this.

00:55:55.390 --> 00:55:57.000 We're may have some version of it

00:55:57.000 --> 00:55:59.717 but not this comprehensive, so kudos (indistinct).

00:56:03.668 --> 00:56:06.730 So I have to say this, the reason why we

00:56:06.730 --> 00:56:08.250 have lower Lyme disease rates,

00:56:08.250 --> 00:56:10.090 because us at the local health department

00:56:10.090 --> 00:56:13.927 are doing a good job, having a little fun here.

00:56:13.927 --> 00:56:15.690 You don't get to have lot of fun.

00:56:15.690 --> 00:56:20.527 (indistinct) Interesting is to see what happens next year

00:56:20.527 --> 00:56:21.850 and the following year now

00:56:21.850 --> 00:56:24.260 that our trails are packed, right?

00:56:24.260 --> 00:56:26.513 So that is probably gonna change.

00:56:27.740 --> 00:56:31.160 So going back to the question about the newly pack.

00:56:31.160 --> 00:56:35.870 As I understand, and the governor through the G3

00:56:35.870 --> 00:56:37.360 is working with other States.

00:56:37.360 --> 00:56:39.270 And I heard about this

00:56:39.270 --> 00:56:41.410 and there's been some newspaper articles

00:56:41.410 --> 00:56:44.330 but I haven't seen anything substantial.

00:56:44.330 --> 00:56:46.530 And I know the governor has been working

00:56:46.530 --> 00:56:48.690 with some other States and some climate change

00:56:48.690 --> 00:56:52.490 trying to sync, that's what our governor is trying to do.

00:56:52.490 --> 00:56:55.370 And I just was wondering if you seen anything,

00:56:55.370 --> 00:56:56.310 I know it's happening

00:56:56.310 --> 00:56:59.853 but I'm not sure it's actually in a report yet.

00:57:01.716 --> 00:57:05.650 - Well, first so I should give Mike some thanks and credit.

00:57:05.650 --> 00:57:09.610 So he leads the local health department

00:57:09.610 --> 00:57:12.190 at the East Shore Health District

00:57:12.190 --> 00:57:15.390 and really leads on bringing climate change

00:57:15.390 --> 00:57:17.510 to the local health districts in Connecticut.

00:57:17.510 --> 00:57:18.860 So thank you for your work.

00:57:20.190 --> 00:57:22.463 And does it well while addressing COVID.

00:57:24.160 --> 00:57:25.683 So I don't know.

00:57:26.698 --> 00:57:28.830 I think the New England governors and in North-east governors

00:57:28.830 --> 00:57:30.110 are always collaborating on things

00:57:30.110 --> 00:57:32.190 and I think fairly see eye to eye

00:57:32.190 --> 00:57:34.800 on climate change issues.

00:57:34.800 --> 00:57:35.960 The one that maybe has been

00:57:35.960 --> 00:57:37.740 in the papers recently is what I mentioned

00:57:37.740 --> 00:57:39.640 about the transportation climate initiative.

00:57:39.640 --> 00:57:41.420 So this is addressing

00:57:41.420 --> 00:57:44.140 and so far three States have signed on Connecticut,

00:57:44.140 --> 00:57:46.060 Rhode Island and Massachusetts.

00:57:46.060 --> 00:57:51.060 So that may be what has come up, but I agree.

00:57:51.620 --> 00:57:54.853 In these small States, again, it's like the air pollution.

00:57:55.970 --> 00:57:59.900 We are very impacted by what happens around us

00:57:59.900 --> 00:58:02.780 and also that there is an efficiency of working together.

00:58:02.780 --> 00:58:06.570 And so if that can happen and now particularly supported

00:58:06.570 --> 00:58:11.160 by federal government actions and incentives

00:58:11.160 --> 00:58:13.160 I think that that's where we need to go.

00:58:14.628 --> 00:58:16.211 - Great, thank you.

00:58:19.750 --> 00:58:23.680 - Great, so it looks like we're out of time,

00:58:23.680 --> 00:58:28.013 but if you have any questions again,

00:58:30.140 --> 00:58:33.023 you can find my contact information or I'll put it here,

00:58:34.350 --> 00:58:35.970 feel free to follow up.

00:58:35.970 --> 00:58:39.670 I'm so happy to have a really engaged audience.

00:58:39.670 --> 00:58:41.820 Thank you again for joining us

00:58:41.820 --> 00:58:43.950 and thank you to all of you for your interest

00:58:43.950 --> 00:58:45.283 in your work in this area.

00:58:49.270 --> 00:58:50.653 Great, take care.

00:58:51.710 --> 00:58:53.600 - [Michael] Have a good weekend, thank you.

00:58:53.600 --> 00:58:54.950 - [Rob] Yeah, bye everyone.

00:58:55.850 --> 00:58:56.683 - [Paula] Excellent job,

00:58:56.683 --> 00:58:58.180 thank you so much for sharing in.