

GoNorth! Fennoscandia 2008

Module 4: Flora & Fauna: Climate Change - Chat #12

Friday, May 2, 2008

Welcome to the FINAL chat on the topic of Climate Change!

Background: Carbon dioxide levels rise. Mercury climbs. Oceans warm. Coral reefs bleach. Glaciers melt. Sea levels rise. Sea ice thins. Permafrost thaws. Migration times vary. Lakes shrink. Snowpack declines. Ice shelves collapse. Wildfires increase. Droughts linger. Winter gets soft. Mountain streams run dry. Flowers get bigger. Trees turn green sooner. Exotic species invade. Cloud forests dry. Spring comes earlier. Fall leaves later.

Global warming or climate change? The National Academies explains that "The phrase climate change is growing in preferred use to global warming because it helps convey that there are changes in addition to rising temperatures." On the other hand, many prefer to continue using the term global warming, to convey a state of urgency. When GoNorth! team member Mille Porsild was asked to become a Climate Witness for the World Wildlife Fund (WWF) in the United Kingdom, Matthew Davis, the climate change campaign director, explained that politicians and the people on the street in the UK are not relating to the term climate change, that they are not considering it a problem of their own! The name later chosen for the WWF campaign was Climate Chaos. This term acknowledges that the continuation of increased carbon dioxide levels at current rates will lead to dramatic environmental and climatic change on a global scale-and that we do not know exactly what this will mean, beyond that it will leave the global environmental balance in a state of chaos.

WWF's Climate Chaos campaign has been very successful so far, in large part because of an instrumental push from former Prime Minister Tony Blair to call for global action at the G8 meetings and in national government actions. As Blair has said, "I want to concentrate on what I believe to be the world's greatest environmental challenge: climate change."

Some questions to possibly open the chat with or discuss prior to the LIVE chat!

List at least three suggestions that might help reduce the emission of greenhouse gases.

Do you believe climate change is a serious environmental problem? Why, or why not?

What are the world's nations doing to prevent or reduce climate change? Is enough being done?

GoNorth! Fennoscandia 2008

Module 4: Flora & Fauna: Climate Change - Chat #12

Friday, May 2, 2008

About our Speaker: Dan Dix

Dan Dix grew up in Mankato, MN and went to Minnesota State in Mankato where he received his Bachelor's and Masters degrees.

Once done with school, Dan got a job as an Aviation Meteorologist from 1992-1995 at Kavouras, Inc. in Mpls, MN where he issued terminal, icing, and turbulence forecasts for numerous airline line clients across the world. In 1996 he got a job as a Storm Warning/Power Utility Company Forecast Meteorologist at WeatherData, Inc in Wichita, KS. For this job he issued severe storm watch/warnings for various clients including major railroad, aviation and power utility companies throughout the United States. He also issued detailed hourly forecasts for Power Utility companies across the Midwest/Plains region.

In 1998 Dan joined The Weather Channel. From 1998-2001 he was a Forecast Sr. Meteorologist and he issued public forecasts that transferred to all platforms (onair, online, radio, etc). From 2001 to the present, he has been a Weather Systems Implementer for The Weather Channel. This means he is responsible for testing and implementing all new graphic software used for on-air product creation and display. He is also a Lead application engineer on SkyTracker/Titan radar and warning display system used on-air.

When not at work, Dan enjoys spending time with his family. He has 5 kids: 3 boys and 2 girls. He also has two dogs, 3 cats, a cockatiel and a little Florida green turtle.

His other interests include the martial arts (Aikido/Aiki-JuJutsu), occasional storm-chasing, aviation, working on his Mac computer and Geocaching using GPS technology.

GoNorth! Fennoscandia 2008

Module 4: Flora & Fauna: Climate Change - Chat #12

Friday, May 2, 2008

GoNorth! Education Basecamp: Good Afternoon Everyone! We are so glad that you could join us today. This is our final chat on the topic of Climate Chaos. Dan is here and ready for your questions!

Ms Havey: Wilson Elem WI: Did you know when you were young and in school that you wanted work in a job where you deal with weather?

GoNorth! Expert: I sure did ... weather and maps were my love as a kid growing up in Minnesota . winter storms were my favorite

Herb Brambley's class, Southern Fulton Elementary School, PA: Herb Brambley's class, Southern Fulton Elementary School, PA (Submitted question): I recently heard that as individuals, there is little we can do to slow global warming. Does that mean we should just go about our business with little concern for global warming? And if we can do something, what one thing will have the greatest impact?

GoNorth! Expert: It depends on who you ask for control of our climate ... there is good argument either way, however, being "green" is still very wise as its benefits are for many things including cleaner air and water ... things essential to human life

Mr Dimmer: 8th: Steffen: We've learned about currents and the jet stream.. did these things fascinate you when you were young?

GoNorth! Expert: Absolutely as they both are key to understanding the weather and how to forecast the near and not-so-near future of weather

Ms Havey: Wilson Elem WI: Were you good in science?

GoNorth! Expert: I was pretty good; I did have to work extra hard in the math department. I was pretty good at maps and geography and the concepts of how it all works together ...

brownpennsylvania: Any advice for high school students who might be aspiring to enter meteorology as far as how to get started in the exploring phase of the career?

GoNorth! Expert: Have a good background in not only science and math but computer science and also good writing and speaking skills .. the more well-rounded the better !

Mr Kroeger 6th MPS: How long have you been chasing storms? Have you ever gotten close to a tornado? If so, what was it like?

GoNorth! Expert: I have chased storms when living in Minnesota and when working in Kansas ...it is an adrenaline rush but also a great learning experience .. but you must be careful and trained in weather to know where and when to go

Mr. Johnson's Class: What is your take on global climate change? Do you believe we are getting warmer and the earth's climate zones are changing or is it cyclic? Do we have it wrong?

GoNorth! Expert: My take is pretty much down the middle; I have seen some of the arguments and evidence on both sides that are not realistic and at times exaggerated ... but there is plenty of evidence that is good and viable .. i believe we are in a climate change (as has been the case since Earth's inception) ... but to blame it all on man-made CO2 and other emissions is not realistic ...

GoNorth! Fennoscandia 2008

Module 4: Flora & Fauna: Climate Change - Chat #12

Friday, May 2, 2008

Mr Dimmer: 8th: Steffen: We read an article today that the North Pole may be ice-free this summer. Do you think that could really happen? If so, how will it all freeze again by next winter? or won't it?

GoNorth! Expert: I have also just see the reports back from NASA satellite imagery indicating in many areas of the Arctic Circle the ice has thickened in the past 3 years ... recall the Northern Hemisphere overall had a fairly cool and snowy winter in many areas ... rather than ice melting across the hemisphere

Lightning Rox: What is your favorite kind of weather?

GoNorth! Expert: Hmmm.I love winter storms but convective (Severe) storms are fun/interesting as well .. Hurricanes are interesting as well but so misunderstood so tough to forecast them

Mr. Johnson's Class: What do you see as some of the major advancements in meteorology today?

GoNorth! Expert: Computer power and speed for sure! Radar technologies are developing rapidly as well as satellite imagery . the network of ground measurement is vast and when you include more portable measurement devices out there it makes for an incredible amount of data in real-time .. overwhelming at times

Ms. Cox's Class: Do you ever want to be like Stephanie Abrams and be on TV?

GoNorth! Expert: I know Stephanie but her job on camera is just not for me; I am a behind the scenes guy who likes to make things work and look good on air for Stephanie and Mike on their show and the other OCMs doing weather

Mr. Johnson's Class: Can you tell us what you do at the Weather Channel? Is it fun?

GoNorth! Expert: I work with the weather data and computer graphics system to display the radar, satellite, current and forecast data to on-air .. When you hear them say "SkyTracker shows some storms here..." -- that is one of the systems I work on

BONNIE-LIGHTNING: How did your obsession with weather start?

GoNorth! Expert: Winter storms as a kid in Minnesota -- the winter of 1982-1983 was the clincher with all the blizzards we had ...

Ms. Cox's Class: What does it take to become a meteorologist?

GoNorth! Expert: Along with the study of math, science (physics, chemistry, etc), computer science, geography and all other classes .. one must have a bit of a passion for the field

Jo-Jo c.r.e.s.: If the ice caps melt what will people do if they live by the ocean?

GoNorth! Expert: Anyone living along the coast would be danger of losing their home obviously ... its something to be watched down the road.... cities would have to relocate pure and simple ...

Mkaila Te@m Fuji: Where do you think the most severe weather in the country is?

GoNorth! Expert: Overall, in Tornado Alley from Texas to southern Minnesota eastward to the Ohio Valley into the Southeast .. severe weather can strike about anywhere....though not as often any Gulf or Atlantic Coastal location can be wiped out in one hurricane but luckily it is rare

GoNorth! Fennoscandia 2008

Module 4: Flora & Fauna: Climate Change - Chat #12

Friday, May 2, 2008

Lightning Rox: What is the worst storm you've ever encountered?

GoNorth! Expert: Worst -- probably a thunderstorms with high winds of 100 mph that I was caught out in at 10pmit was scary and threw me against the garage door ..

Mr. Johnson's Class: What was it like growing up in MN and now living in Atlanta?

GoNorth! Expert: Love Minnesotaits home. Atlanta, GA is nice with many things to do but awfully crowded these days...over 5 million in the metro area as it is one of the fastest growing areas in the country. The Winters are easy compared to Minnesota. The summers can be hot but rarely hits 100 degrees here if you can believe it...

Mr. Johnson's Class: Why have we had so many tornados this year?

GoNorth! Expert: LaNina weather pattern sometimes favors a stronger jetsream across the nation and we have seen the result of that since January . A very busy season already for The Weather Channel in coverage

Guest: What you are not forecasting weather, what do you like to do?

GoNorth! Expert: Well, I don't operationally forecast any more unless the forecast center needs me to fill in during their annual meetings so I typically work on computer and data items but still forecast on my own to keep the skills sharp ...

Mkaila Te@m Fuji: Have you ever personally been scared or freaked out by a storm or weather?

GoNorth! Expert: Absolutely! Storm chasing in Northern Oklahoma. It went dark and then a storm was generating a mesocyclone and the lightning flashed to my left and a funnel was dropping to the ground about 1/2 mile away....the winds were strong and rocked the car .. I knew the type of storm it was and actually turned a bit toward it as I knew it was turning to the right .. had I not been trained ...well, I might not be here today typing to you ..!

Lightning Rox: How bad do you think global warming is?

GoNorth! Expert: Tough to tell to be honest. Do I think its as bad as some claim -- no. Is it happening -- yes. It is all man-made -- no. And, the interesting thing is that it continues to change with periods of cooling and warming ... there is evidence of cooling as of late and potentially the next several years ..

Ms Havey: Wilson Elem WI: what does la nina mean?

GoNorth! Expert: It means "Little Girl" in Spanish ... waters in the Pacific cool in the eastern portion of the equatorial region .. this enhances the Atlantic tropical weather and also strengthens the jetstream a bit for the southern and central states .. weather can be widely varied so not always the same ..

Mkaila Te@m Fuji: If you were not a meteorologist what would you do?

GoNorth! Expert: hmmm..... maybe a mapmaker/cartographer or GIS specialist or a geography teacher perhaps or computer consultant or even teach martial arts full-time .. anything is possible

GoNorth! Fennoscandia 2008

Module 4: Flora & Fauna: Climate Change - Chat #12

Friday, May 2, 2008

Herb Brambley's class, Southern Fulton Elementary School, PA: Is there a relationship between population and climate change? Should we be trying to slow population grow or at least make people aware of the relationship between population and climate change?

GoNorth! Expert: Though I don't people are the sole reason for any climate change I do believe conservation, alternative fuel sources and simply more efficient means of power would be at least helpful but not the main catalyst for climate change

Guest: Why do people chase storm?

GoNorth! Expert: It started out for the sake of science but has turned into an adrenaline , thrill seeking adventure. There are small companies that tour around with paying customers tagging along to see storms across the Plains; people from all over the world sign up as their vacation to do this..... the financial side of this has become lucrative for a few while the data for researchers has been immense... also chasers/spotters offer up live, on-sight info for meteorologists and TV stations to get the word out

Mkaila Te@m Fuji: Have you ever been wrong predicting or "calling" weather?

GoNorth! Expert: Sure have .. forecasting the weather is tough. When people say they can do my job I hand them some info, bring up some computer info and let them decide what is going to happen ... they are clueless .. it is very tough as we trying to forecast with limited data as much of the atmosphere is not sampled ... we are right nearly 80% believe it or not on the 1-2 day forecast..and about 50-55% for days 3-5

GoNorth! Education Basecamp: These are fabulous questions! We have about 10 minutes left....enough time for a few more questions.

Ms. Cox's Class: It is interesting to us how the media has changed their message regarding global climate change. First, you rarely hear "global warming," it is "global climate change. Second, we rarely heard about going "green" and now we hear it daily. Why is this? Is it related to the economy?

GoNorth! Expert: Its due to MANY factors of which political reasons is is not the least; also, due to much of the information first presented a few years ago was found to be false or exaggerated with no real scientific foundation ... much more research is being done now and findings are becoming a little better ... going "green" is really an old thing but now its "cool to be green" so companies, governments, etc are now partaking .. too bad it wasn't 20 years ago when it started ..

Lightning Rox: What do you think it would be like to be in the middle of a hurricane

GoNorth! Expert: In the middle -- its actually very calm and even sunny skies at times once away from the middle into the walls its a whole different story ...take a look at a text book or webpage about the structure and you will see the dynamic forces of what a hurricane is .. very amazing indeed

Guest: What do you think about the climate line changes they have been discussing here in MN? Will we soon have climate like St. Louis?

GoNorth! Expert: Tough to say -- You can ask the farmers and anyone else in MN/Dakotas/Wis/Iowa how they feel this Spring given the cold and wet winter and spring that has hampered crops .. record snows fell in parts of Minnesota this Winter and Spring along with below normal temperatures for the season...

GoNorth! Fennoscandia 2008

Module 4: Flora & Fauna: Climate Change - Chat #12

Friday, May 2, 2008

CRES-BIG CHEESE: Given all of the technology, it still seems forecasting weather is a challenge. Is this due to the huge number of variables with the weather. Each weather station seems to have a slightly different take on the weather.

GoNorth! Expert: Exactly! And, each geographic location has its own types of weather, micro-climates and so on ... always a learning lesson. computer models can only do so much and they at times are really wrong for even 12- 24 hrs out ... another reason to not blindly believe models that are set to forecast conditions 20 to 50 to 100 years from now ...

CRES-BIG CHEESE: We are 2 weeks behind our average Phenological events here in Northcentral Minnesota this season. Cooler and Wetter than average.

GoNorth! Expert: Very true .. and this is the case in many areas of the Northern Hemisphere ... interesting, huh? IT was also supposed to be warm and dry in Georgia but we had a near-normal precipitation season helping our drought a bit and the last two hurricane seasons have been very weak despite claims it would be so bad due to "global warming"

GoNorth! Education Basecamp: While Dan is answering his last question, we want to thank you for joining us today. We had so much fun and we hope that you not only enjoyed yourself, but learned a lot too-

GoNorth! Education Basecamp: Lets thank Dan for answering our questions today!!

Mr Dimmer: 8th: Steffen: Is there 'one thing' you would like us to take from our discussion with you about the changing climate?

GoNorth! Expert: Understand that it is always changing and to dig deep into the information provided by both sides of the argument; being wise with energy usage is key no matter if we are warming or cooling as the effect on water and air is a far more immediate impact

Mr. Johnson's Class:: We are very envious of your job. Thanks so much for answering our questions. You are truly gifted.

Mr Dimmer: 8th: Steffen: Thanks so much! We enjoyed talking with you a lot!!!

Mr Kroeger 6th MPS: Thank you Dan! We enjoyed talking to you again this year!!!! Hope to see you next year for Greenland too~

Ms Havey: Wilson Elem WI: Thank you for answering our questions!!!

GoNorth! Expert: Thank you and I appreciate the great questions ..!

Mkaila Te@m Fuji: Thank you so much for answering the questions!!

Thank You

From all of us at Team GoNorth!, Thank You for joining us today!