

»Mangelnde Voraussicht, Nichtbereitschaft zu handeln wenn Maßnahmen einfach und wirksam wären, Mangel an klarem Denken, ein Durcheinander von Ratschlägen, bis der Notfall eintritt, bis der Selbsterhaltungstrieb Alarm schlägt – dies alles sind die Merkmale der endlosen Wiederholung der Geschichte. «  
WINSTON CHURCHILL, Britisches Unterhaus, London, 1935

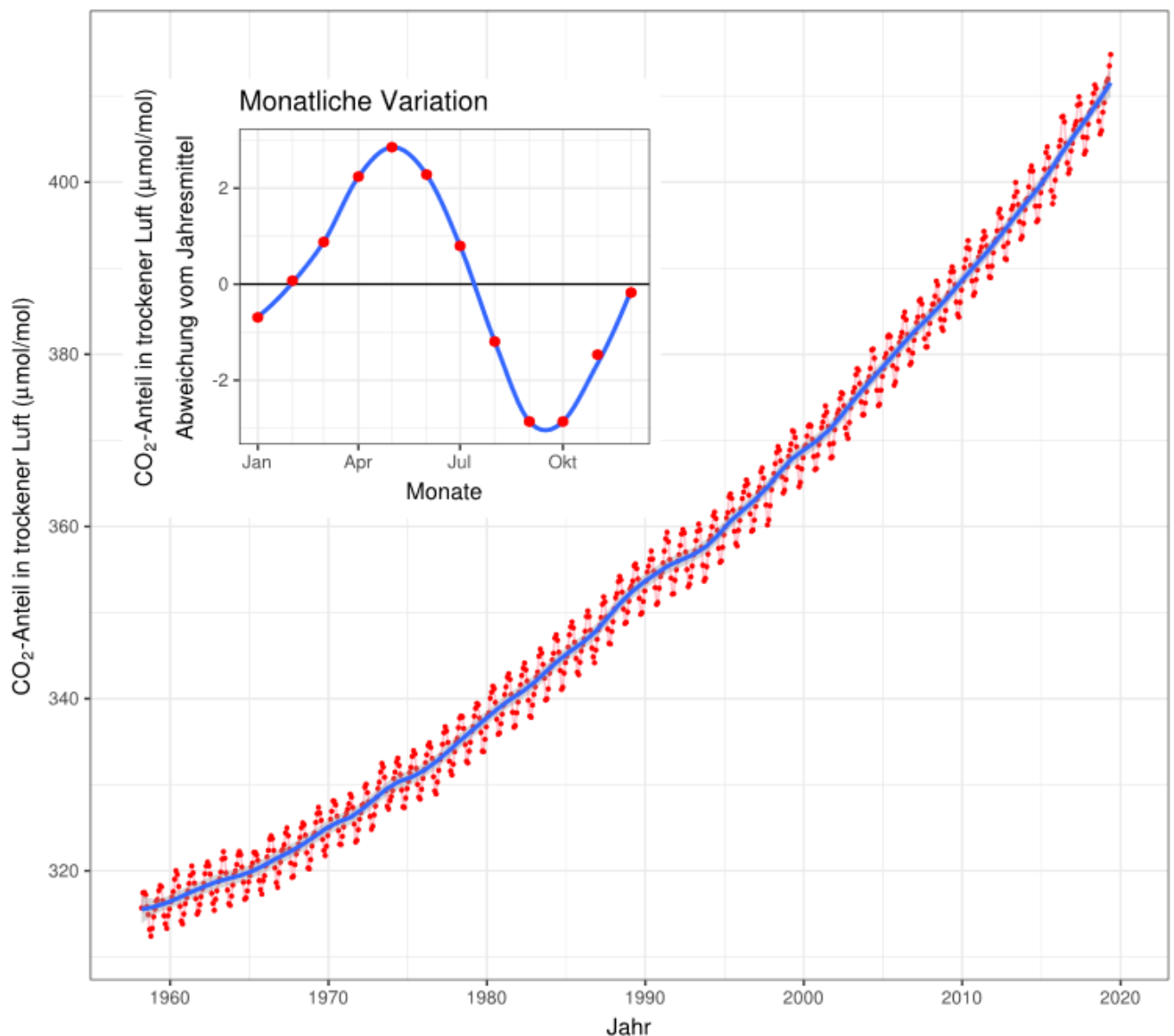
### Die KEELING-Kurve: CO<sub>2</sub> in der Atmosphäre 1958 – 2019

gemessen von Charles David Keeling und Kollegen,

Scripps Institution of Oceanography, University of California, San Diego, USA

Monatliche durchschnittliche CO<sub>2</sub>-Konzentration

Mauna Loa 1958 - 2019



Quelle: R. F. Keeling, S. J. Walker, S. C. Piper und A. F. Bollenbacher  
Scripps CO<sub>2</sub> Program (<http://scrippsco2.ucsd.edu>). Zugänglich am 2019-07-20

Gabor Steingart, 23.08.2019:

„In der Flammenhölle des Amazonas  
brennt gerade der Glaube an eine bessere Welt ab“



<https://p5.focus.de/img/fotos/origs11059514/7315445345-w630-h354-o-q75-p5/modis.jpg>

[https://www.focus.de/politik/experten/grosse-ambition-kein-plan-amazonas-waldbraende-zeigen-beim-klimaschutz-ist-g7-in-ohnmacht-vereint\\_id\\_11060629.html](https://www.focus.de/politik/experten/grosse-ambition-kein-plan-amazonas-waldbraende-zeigen-beim-klimaschutz-ist-g7-in-ohnmacht-vereint_id_11060629.html)

Eine Dokumentation von Joachim Felix Hornung

Inhalt

- A0. IPCC, der Weltklimarat
- A1. Treibhauseffekt (Erklärung)
- A2. Selbstverstärkung (Erklärung)
- B. Die Albedo
- C. Der Albedo-Effekt
- D. Versauerung der Weltmeere
- E. Verdampfen von Meerwasser
- F. Methan
- G. Lachgas
- H. Verdorren von Wäldern, Waldbrände
- H1. Interview Prof. Nobre
- x001 Kipp-Punkte des Klimas, points of no-return
- x002 Primäre Ursachen des Klimawandels
- x003 Folgen des Klimawandels
- x004 Tabelle: Treibhausgase
- x005 Aussagen zum Klimawandel
- x006 Greta's Worte
- x007 Some more statements on climate change
- x008 Some more words of Greta's

**Glossar, Wörterbuch**

**Literatur**

- IPCC ... Intergovernmental Panel on Climate Change
- vvv ... Literatur in englischer und deutscher Sprache
- Greta ... Greta's Worte

## A0. IPCC, die Organisation der Vereinten Nationen zum Klimawandel

IPCC03c	IPCC 1,5 °C Bericht von 2018 Hauptaussagen  »Eine Erwärmung von 2,0 °C hat weitaus drastischere Folgen als eine Erwärmung von 1,5 °C.«  Die Begrenzung der globalen Erwärmung auf 1,5°C erfordert schnelle, tiefgreifende und beispiellose Veränderungen in allen Bereichen der Gesellschaft.	08Aug2018
---------	--	-----------

IPCC06e	„Klimabericht des IPCC: Meeresspiegel steigt immer schneller an.“  Frankreichs Staatspräsident Emmanuel Macron äußerte sich angesichts des Berichts bereits am Dienstag vor den Vereinten Nationen in New York bestürzt:  » Wir sind absolut geschockt von dem jüngsten Bericht des IPCC, es ist absolut verheerend - im Moment verlieren wir den Kampf. «  Andreas Oeschies vom Helmholtz Zentrum für Ozeanforschung (Geomar):  »Das Tempo, mit dem das Eis von Grönland abschmilzt, hat sich in den letzten zehn Jahren verdreifacht, die Schmelzrate der Antarktis verdoppelt. Für die Antarktis werden erstmals Anzeichen dafür gesehen, dass ein unumkehrbares Abrutschen großer Teile des Festlandeises begonnen hat. «  »In diesem Bericht des Weltklimarats wird erstmals festgestellt, dass die Auswirkungen des Klimawandels auf marine Ökosysteme inzwischen in allen Regionen des Weltozeans beobachtet werden können. «	Focus online 25Sep2019
---------	--	---------------------------

IPCC06b	IPCC Presse-Veröffentlichung (zu IPCC06, s.u.)  »Entscheidungen, die jetzt getroffen werden, sind entscheidend für die Zukunft unserer Ozeane und für unsere Tieftemperaturzonen.«	25Sep2019
---------	---	-----------

IPCC06a	„Die Erde versinkt in Wasser und Salz“  Ein neuer Bericht des Weltklimarats IPCC zeigt: Eis schwindet, Meeresspiegel steigen, Ozeane versauern – der fürs Klima bedeutenden Wasserwelt geht es immer schlechter. Ein ausführlicher Bericht über IPCC06 mit folgenden Kapiteln: <ul style="list-style-type: none"><li>- Weniger Permafrost, mehr Methan,</li><li>- Nachschub an Frischwasser lässt nach,</li><li>- Ewiges Eis an den Polen schwindet,</li><li>- Immer schneller, immer höher steigt der Meeresspiegel,</li><li>- Die Erde wird salziger,</li></ul>	25Sep2019 Zeit online
---------	--	--------------------------

<ul style="list-style-type: none"> <li>- Heißer und saurer – die Zukunft der Ozeane,</li> <li>- Und was bedeutet all das für Deutschland?</li> </ul>	
<p><b>IPCC06</b> „Special Report on the Ocean and Cryosphere in a Changing Climate”</p> <p>Für diesen Sonderbericht bewerteten mehr als 100 Wissenschaftler aus mehr als 30 Ländern die neuesten wissenschaftlichen Erkenntnisse über die physikalischen Grundlagen und Auswirkungen des Klimawandels auf die Ökosysteme von Ozeanen, Küsten, Polen und Bergen sowie die von ihnen abhängigen menschlichen Gemeinschaften aus.</p>	<p>‘SROCC’ <b>25Sep2019</b></p>
<p><b>IPCC05</b> "Land ist eine lebenswichtige Ressource"</p>	<p><b>08Aug2019</b></p>
<p><b>IPCC05b</b> „Die Klimazonen verschieben sich“</p>	<p><b>25Jul2019</b></p>
<p><b>IPCC03a</b> Statement by the Secretary-General of the UN, António Guterres, on the IPCC Special Report Global Warming of 1.5 °C (IPCC03c):</p> <p style="text-align: center;"><b>» Dieser Bericht der weltweit führenden Klimawissenschaftler ist ein schriller Weckruf an die Welt. Er bestätigt, dass der Klimawandel schneller voranschreitet als wir - und uns läuft die Zeit davon. «</b></p>	<p><b>08Sept2018</b></p>
<p><b>IPCC, der Weltklimarat, the Intergovernmental Panel on Climate Change</b></p> <p>Das IPCC gibt immer wieder umfangreiche Übersichten über die neuesten wissenschaftlichen Erkenntnisse zur Entwicklung des Weltklimas und dessen Folgen heraus; das IPCC ist eine Organisation von Regierungen, die Mitglied der Vereinten Nationen oder der WMO = World Meteorological Organization sind. Das IPCC hat derzeit <b>195</b> Staaten als Mitglieder.</p>	<p><a href="http://www.ipcc.ch">www.ipcc.ch</a> about</p>

### **A1. Was ist der Treibhauseffekt ?**

Die Grundlage des **Treibhauseffektes** ist die Tatsache, dass gewöhnliche Luft, hauptsächlich bestehend aus Sauerstoff O<sub>2</sub> und Stickstoff N<sub>2</sub>, sowohl sichtbares Licht als auch Infrarotlicht nahezu ungehindert hindurch lässt. Hingegen lassen die Treibhausgase CO<sub>2</sub>, Methan, Fluorkohlenwasserstoffe und Lachgas, und daneben auch Wasserdampf, sichtbares Licht ungehindert hindurch, Infrarotlicht absorbieren sie aber und wärmen sich selbst und die Atmosphäre dabei auf.

Wenn Sonnenlicht auf Eis und Schnee auftrifft, hat das reflektierte Licht nahezu dieselben Eigenschaften wie das Sonnenlicht selbst und durchdringt auf seinem Rückweg nach oben in die Atmosphäre die normale Luft und auch die Treibhausgase ungehindert und verschwindet im Weltall.

Wenn Sonnenlicht jedoch auf Wasser oder auf freie Landflächen auftrifft, wird es zum großen Teil in Form von Infrarotlicht zurückgeworfen, welches zwar O<sub>2</sub> und N<sub>2</sub> ungehindert passieren kann, von den Treibhausgasen aber aufgehalten und in Wärme umgewandelt wird.

Dadurch leben wir ständig in einem Treibhaus. So war es immer schon; da die Treibhausgase im vorindustriellen Zeitalter aber weniger waren als heute, stabilisierte sich die Temperatur auf der Erde bei durchschnittlich + 10 °C. Es wurden ständig so viele Treibhausgase abgebaut, wie natürlicherweise neue hinzukamen. Ohne den immer schon vorhanden gewesenen Treibhauseffekt hätte die Durchschnittstemperatur an der Erdoberfläche damals bei ca. -18 °C gelegen. Brrrr.

Da wir inzwischen aber mehr Treibhausgase produzieren, steigt die Temperatur auf der Erde an.

Näheres zu den einzelnen Treibhausgasen siehe Abschnitt [x004](#)

Literatur z.B.: Wikipedia „Treibhauseffekt“

## A2. Was ist eine Selbstverstärkung?

Unter **Selbstverstärkung** des Klimawandels, der Erderwärmung oder des Treibhauseffekts, versteht man eine Beschleunigung des Wandels durch die allgemeine Erwärmung selbst. Die Wirkung wird zur Ursache.

Eine Selbstverstärkung in diesem Sinne entsteht durch eine **positive Rückkopplung**, einen **positiven Feedback**. Man spricht auch von einem Sich-Aufschaukeln oder im Extremfall von einem galoppierenden Treibhauseffekt.

Weitere Worte für die Selbstverstärkung sind: Selbstbeschleunigung, Teufelskreis oder Circulus vitiosus, Kettenreaktion, Schneeballeffekt, Selbstläufer, perpetuum mobile, abrupte Veränderung, Umkippen.

Wohlbekannte Formen der Selbstverstärkung sind der Börsencrash und die akustische Rückkopplung zwischen Mikrofon und Lautsprecher, sehr unangenehm bei Hörgeräten.

Eine positive Rückkopplung kann sich so aufschaukeln, dass sie die ursprüngliche Ursache gar nicht mehr benötigt, um weiter zu bestehen.

*Das bekannteste Beispiel für eine Selbstverstärkung des Klimawandels ist der **Albedo-Effekt**. Doch zunächst einmal: Was ist die Albedo?*

**B. Die Albedo** ist ein Maß für die Reflexion von Licht an einer nicht selbst leuchtenden Oberfläche, z.B. bei einem schönen neuen Auto.

Die möglichen Werte gehen von 0 bis 1:

0 = keine Reflexion; 1 = 100% Reflexion.

Näheres siehe Wikipedia: „Albedo“.

Das Gegenstück zur Albedo (Reflexionsvermögen) einer Oberfläche ist ihr Absorptionsvermögen für Licht in der Weise, dass sich Reflexion und Absorption zu 100 % ergänzen.

Wenn z.B. eine rote Oberfläche von weißem Licht getroffen wird, aber nur rotes Licht reflektiert, so wird der Energiegehalt des reflektierten roten Lichts mit dem Energiegehalt des auftreffenden weißen Lichts verglichen. Der Rest ist derjenige Teil des Lichts, der absorbiert und in Wärme umgewandelt wird, was wieder eine Energiemenge ist. Die 3 Energieströme werden in Watt gemessen, auf eine bestimmte Fläche bezogen in Watt pro Quadratmeter, W/m<sup>2</sup>.

Für den Wärmehaushalt unserer Erde und damit für das Leben auf der Erde ist die Sonneneinstrahlung am wichtigsten. Die Erde empfängt von der Sonne 340 W/m<sup>2</sup>, wovon aber 110 W/m<sup>2</sup> sofort in den Weltraum zurückgestrahlt werden und somit 230 W/m<sup>2</sup> zur Erwärmung des Planeten zur Verfügung stehen. Davon erwärmen sich die Atmosphäre mit 70 W/m<sup>2</sup> und die Erdoberfläche um 160 W/m<sup>2</sup>.

Wird es auf der Erde also immer wärmer? Im vorindustriellen Zeitalter nicht, da die Erde die aufgenommene Energie vollständig wieder in den Weltraum zurückstrahlte und zwar in Form von Infrarotstrahlung, also als wärmeres, längerwelliges Licht als das einfallende Sonnenlicht.

Die Erde befand sich somit in einem energetischen Gleichgewicht, welches durch die vermehrte Produktion von Treibhausgasen jetzt aber gestört wird.

Für das Klima sind die hohe Albedo von Eis und Schnee einerseits und die geringe Albedo von Wasser und freien Landflächen andererseits von Bedeutung.

Es folgen einige der wichtigsten Albedo-Werte:

Oberfläche	Albedo	Oberfläche	Albedo	Oberfläche	Albedo
Eis	35 %	Felder unbestellt	20 %	Wüste	30 %
frischer Schnee	85 %	Wald	12 %	Wolken	60 %
alter Schnee	60 %	Wasser	20 %	gesamte Erde	30 %

Anmerkung: Die Zahlenwerte sind der besseren Lesbarkeit als nur eine Zahl angegeben.

Bereiche für die Albedo-Werte findet man in (vfv023) und (vfv023a).

Beim Auftreffen von Sonnenlicht auf Eis wird sehr viel mehr Licht in Wärme umgewandelt (65%) als beim Auftreffen auf frischen Schnee (15%). Umgekehrt wird also von Eis weniger Licht reflektiert (35%) als von Schnee (85%).

### **C. Der Albedo-Effekt ist eine Form der Selbstverstärkung des Klimawandels.**

Das Abschmelzen von Eis und Schnee durch die bereits stattfindende Erwärmung bewirkt eine noch stärkere Erwärmung, also eine positive Rückkopplung, ein Aufschaukeln, auf folgende Weise:

Land, Wasser und Luft erwärmen sich durch den Treibhaus-Effekt:

→ Eis und Schnee schmelzen ab, die **Albedo** in diesen Gegenden sinkt ab,

→ Wo bisher Eis und Schnee waren, sind jetzt Wasser und freies Land mit einer niedrigeren Albedo,

→ dort wird jetzt weniger Sonnenlicht ins Weltall zurückgeworfen,

→ stattdessen erwärmen sich dort Wasser und Land,

- > Wasser und Land werfen einen großen Teil der Wärme-Energie in Form von Infrarot-Strahlung nach oben zurück,
- > Infrarot-Strahlung (=Wärmestrahlung) kann aber die oberen Schichten der Atmosphäre, in der sich die Treibhausgase angesammelt haben, nicht durchdringen; Treibhausgase sind für Infrarotlicht undurchlässig,
- > die Atmosphäre heizt sich weiter auf.

Eine Selbstverstärkung im Klimawandel bedeutet, dass über den direkten Einfluss der Ursachen (z.B.CO2) hinaus die Folgen der Erwärmung selbst wieder zu Ursachen werden.

Die wichtigsten stark reflektierenden Oberflächen sind: Die Schneedecke in Sibirien, das Eis an den Polen, das Packeis in den Polarmeeren, das Grönlandeis, die Gletscher in den Gebirgen, Schnee und Eis im Tibetischen Hochland. Sie warfen das Sonnenlicht zurück in den Weltraum zurück, schmelzen jetzt aber ab und sind dann keine guten Reflektoren mehr.

Solche Effekte der Selbstverstärkung sind in den Modellrechnungen der Klimaforscher bisher offenbar nicht enthalten, d.h., man hat nur die direkten Auswirkungen der Emission von Treibhausgasen berücksichtigt, nicht aber die positiven Rückkopplungen. (vv031, vvv008, vvv028)

Das hat zur Folge, dass die Klimaziele, die sich die Politiker auf immer neuen Treffen setzen, völlig unzureichend wären, selbst wenn sie eingehalten würden (was offensichtlich nicht der Fall ist).

Man sieht dies schon an den neuesten Daten über das Abschmelzen des Polareises, über das Abschmelzen des Grönlandeises über da Abschmelzen der Gletscher im Himalaya, usw.

Siehe z.B. UNEP, vvv006, IPCC03, vvv015, vvv017

All diese Meldungen zeigen, dass man bisher die Geschwindigkeit des Klimawandels unterschätzt hat.

Es gibt weitere Effekte der Selbstbeschleunigung des Klimawandels, die ebenfalls bisher unzureichend berücksichtigt wurden und auch rechnerisch schwer zu erfassen sind, z.B.:

**D. Versauerung der Weltmeere.** Meerwasser bindet CO<sub>2</sub>. Durch den Anstieg des CO<sub>2</sub> zunächst in der Luft, dann aber auch im Wasser, werden die Meere saurer und durch die allgemeine Erwärmung werden sie wärmer. Dadurch stirbt Phytoplankton. Diese winzig kleinen Algen binden ungefähr die Hälfte unserer CO<sub>2</sub>-Emissionen und produzieren 50 – 80 % des Sauerstoffs der Atmosphäre. Je mehr CO<sub>2</sub> wir ausstoßen, desto schneller sterben die Algen ab, umso weniger CO<sub>2</sub> binden sie und umso weniger O<sub>2</sub> produzieren sie, d.h., die Weltmeere speichern im Effekt weniger CO<sub>2</sub> und veröden aus Nahrungsmangel für die Fische.

»Vor allem durch ansteigende Meerestemperaturen ist die Menge des marinen Phytoplanktons seit 1950 um 40 % zurückgegangen.« siehe Wikipedia „Phytoplankton“.

Die Versauerung der Weltmeere ist ein selbstbeschleunigender Effekt des Klimawandels insofern, als dadurch weniger CO<sub>2</sub> gebunden und somit mehr CO<sub>2</sub> in die Atmosphäre entlassen wird.



**E. Verdampfen von Meerwasser.** Je wärmer es wird, desto mehr Meerwasser verdampft. Wasserdampf ist ein hochwirksames Treibhausgas.

**F. Methan = CH<sub>4</sub>.** Freisetzung von Methan aus dem auftauenden Permafrostboden, aus dem Meeresboden bei Erwärmung der Meere und aus dem wärmeren Meerwasser selbst. Methan ist als Treibhausgas 30x so schädlich wie CO<sub>2</sub>. Die vermehrte Freisetzung von Methan durch die Erderwärmung führt zu einer Selbstbeschleunigung des Klimawandels.

(Erzeugung und Freisetzung von Methan durch eine ungesunde Landwirtschaft und Viehzucht sind kein Teil der Selbstverstärkung des Klimawandels, sondern eine primäre Ursache desselben.)

**G. Lachgas.** Es ist soeben erkannt worden, dass beim Auftauen des Permafrosts 12x so viel Lachgas N<sub>2</sub>O freigesetzt wird als bisher angenommen. Lachgas ist als Treibhausgas 300x so schädlich wie CO<sub>2</sub>. (vvv020) **06Jun2019**, (vvv041) BBC **17Jun2019**, (vvv042) **30Apr2019**

**H. Verdorren von Wäldern, Waldbrände.** Durch die allgemeine Erwärmung verdorren die Wälder – z.B. in Deutschland bereits erschreckend sichtbar – und es gibt mehr Waldbrände, wie nun allgemein bekannt ist.

**Wälder** speichern viel Kohlenstoff C, indem die Bäume (wie alle Pflanzen) das CO<sub>2</sub> aus der Luft in C und O<sub>2</sub> aufspaltet, das C in der Biomasse speichern und das O<sub>2</sub> in die Luft abgeben.

Wälder speichern auch viel Wasser. Die durch Dürre und Hitze verstärkt auftretenden Waldbrände setzen große Mengen CO<sub>2</sub> frei. Durch die Dürre vertrocknen die Wälder und sterben ab. Diese Effekte bedeuten eine Selbstbeschleunigung der Erderwärmung.

(Wälder werden in großem Stil abgeholzt, wie z.B. in Südamerika für Weideland und Soja-Anbau, in Indonesien für die Palmöl-Produktion. Holz ist auch ein begehrter Rohstoff. Die «Abholzung ist kein selbstverstärkender Effekt, sondern eine Primär-Ursache des Klimawandels und zudem eine Riesen-Schweineerei.)

**H 1. Prof. Nobre** nimmt in dem folgenden Interview vom **29Aug2019**

„Nicht nur für Brasilien wird es das Ende sein“

zu den Folgen der Brände im Amazonas-Urwald Stellung. (vvv045c)

**Prof. Antonio Donato Nobre** ist einer der wichtigsten brasilianischen Spezialisten für Urwaldökologie. Er beriet die Regierung für das brasilianische Waldschutzgesetz, dem „codigo florestal“. Er lebte und forschte über 14 Jahre in Manaus im Amazonas. Zurzeit ist er Professor am brasilianischen Institut für Weltraumforschung in Sao José dos Campos bei São Paulo, welches die Entwaldungen und Waldbrände erfasst.

Interviewer: » Warum wurde der Direktor des staatlichen Instituts Brasiliens für die Erfassung der Entwaldung in der Amazonas-Region (INPE), Ricardo Galvão, kürzlich von Präsident Bolsonaro gefeuert? «

Prof. Nobre: »Zum einen war Galvão empört über das, was die Regierung Bolsonaro seit ihrem Amtseintritt bezüglich der Regenwaldvernichtung in ihrer kurzen Amtszeit bereits angerichtet hat. Die neuesten satellitengestützten Datenreihen, die das INPE gerade auf seiner Internetseite veröffentlicht hatte, – unsere gesetzliche Pflicht – sprechen da eine deutliche Sprache.

Zum Anderen war unser Institutsleiter, ein Mitglied der Akademie der Wissenschaften und hochangesehener Forscherkollege, empört über die persönlichen Angriffe des Präsidenten gegen ihn. Bolsonaro und seine Berater haben einfach behauptet, unsere Daten bezüglich der Regenwaldvernichtung seien blanke Lügen.

Tatsächlich sind es aber Bolsonaro und seine Mitarbeiter, die Lügen fabrizieren. Nach diesen persönlichen Attacken gegen sich und seine Mitarbeiter hat er sich dann in einer öffentlich Erklärung gegen den Präsidenten zur Wehr gesetzt. Und das deutlich. Das Ergebnis: Einer der angesehensten Wissenschaftler unseres Landes wurde gefeuert und durch einen Militär ersetzt.«.

Interviewer: » Die erschütternden Bilder aus dem Amazonasgebiet gehen ja gerade um die Welt. Wie ist die aktuelle Lage vor Ort? «

Prof. Nobre: »Es ist wirklich sehr, sehr schlimm. Es ist eindeutig, dass die jetzigen Brände auf illegale Brandstiftung durch diejenigen zurückgehen, die den Wald ökonomisch für ihre partikularen Interessen ausbeuten wollen: Landräuber, Holzhändler und Viehzüchter. Wer neues Land für sich haben will, geht nach den alt hergebrachten Regeln des Hinterlands vor: Entwalde das Land und es ist Deins. Also brenne den Wald ab und lass Dir dann ein Dokument ausstellen, dass es nun in deinem Besitz ist. «

Interviewer: »Was sind denn die direkten Folgen der Brände? «

Prof. Nobre: »Wir haben lokale, regionale und natürlich globale Auswirkungen. Alle drei haben bereits ein sehr, sehr ernstes, ja katastrophales Niveau erreicht. Neueste, noch nicht veröffentlichte Studien zeigen, dass der Osten Amazoniens den Kippunkt (siehe [x001](#)) schon überschritten hat. Das Klima hat sich bereits so verändert, dass sich der Wald nicht mehr halten kann.

Das wiederum hat immense Auswirkungen auf die „biotische Pumpe“, welche die sogenannten fliegenden Flüsse kreiert. Luftströme, die durch den Wald emittierte Feuchtigkeit in der Atmosphäre über tausende Kilometer nach Zentralbrasilien mit seiner riesigen landwirtschaftlichen Produktion und in den brasilianischen Süden, ökonomisches Zentrum des Landes, transportiert, sie dort abregnen lässt und so überhaupt erst Leben in Städten wie São Paulo ermöglicht.

Ohne diese Wasser aus dem Amazonas wäre das alles Wüste. Und was hatten wir gerade in São Paulo? Da erschien statt der Feuchtigkeit der fliegenden Flüsse ein Strom von dunkel rostfarbigem Rauch über der Stadt, traf auf eine Kaltfront und verdunkelte den Himmel dergestalt, dass es um 15 Uhr stockfinstere Nacht wurde und in der gesamten Stadt die Lichter

angingen. Aber es regnete fast gar nicht. Das Wenige was aus diesen giftigen Wolken fiel, war Asche aus dem Amazonasgebiet. «

Die gerade beschriebenen lokalen und regionalen Effekte haben natürlich auch heftige globale Auswirkungen. Hier geht es um die Verbindung des Atlantischen mit dem Pazifischen Ozean und mit den Zirkulationssystemen in der Atmosphäre. Der Amazonas ist der territoriale hydrologische Verknüpfungspunkt zwischen diesen beiden Ozeanen und beeinflusst in diesem Zusammenhang natürlich auch Europa.

Warum? Weil die mit Feuchtigkeit gespeisten Luftströme über den Atlantik und entlang der afrikanischen Küste bis in die Karibik und nach Südamerika wehen. Diese mit Feuchtigkeit getränkten Luftströme über dem karibischen Teil des Atlantiks sind sozusagen das Kopfende des Golfstroms, der nun wiederum das gesamte Klima in Europa bestimmt. Das ist ein riesiges, in sich verknüpftes komplexes System. «

Interviewer: »Welche Folgen gibt es noch? «

Prof. Nobre: »Ein weiterer Punkt ist die Wasserverdunstung an sich. Der Wald emittiert Feuchtigkeit, die in ein paar tausend Meter Höhe durch Kondensation Wolken bildet, was wiederum die unter ihnen liegenden Erdformationen abkühlt. Das ist der vertikal wirksame Effekt. Ebenfalls haben wir einen horizontalen Effekt: Durch die eben angesprochenen Luftströme und Winde wird die Feuchtigkeit der heißen äquatorialen Gegenden in die kalten, eigentlich sehr trockenen nördlichen Gebiete des Planeten transportiert.

Die äquatorialen Wälder sind also existenziell für den Transport von Feuchtigkeit der tropischen Zonen auch in die nördlichen Gebiete des Planeten. Den amazonischen Regenwald zu zerstören, bedeutet das Herz des Planeten anzugreifen. Außerdem können wir das im Pariser Abkommen festgelegte Klimaziel von höchstens zwei Grad Erwärmung völlig vergessen, wenn wir diesen Regenwald vernichten. Der Regenwald ist ein riesiger Speicher von Kohlenstoff. Kohlenstoff, der nun freigesetzt wird. Also das was gerade stattfindet, ist in Bezug aufs Klima ungeheuer verantwortungslos. « ...

»Ich kämpfe seit Anfang meiner Karriere dafür, Amazonien zu schützen, weil es zum einen unsere Schatztruhe ist und zum anderen unsere Souveränität garantiert. Ohne den Wald wird Brasilien zur Wüste.

**Und nicht nur für Brasilien wird es das Ende sein.**

Aber wie willst Du den Leuten erklären, dass man auf unserem Planeten nicht mehr wird leben können? Das kann man sich eben nicht vorstellen. Und deswegen ist es so schwer den Menschen die Konsequenzen begreifbar zu machen. « (vvv045c) **29Aug2019**

**Das vollständige Interview von Andreas Weiser mit Prof. Nobre lesen Sie [hier](#).**

**Bolivien:**

**» Der Urwald ist verloren «**

vvv045d **03Sep2019**

Bolsonaro ist rechts – aber linke Regierungen sind in Lateinamerika nicht unbedingt besser für die Umwelt. In Bolivien hat etwa der sozialistische Präsident Evo Morales Anfang Juli "kontrollierte Brände" per Dekret erlaubt, um Viehweiden und Ackerflächen zu gewinnen. Wenig später zerstörten Feuer auch in Bolivien Hunderttausende Hektar Wald.

*Sheyla Martínez ist Koordinatorin des Grupo de Trabajo Cambio Climático y Justicia, einem Netzwerk von nach eigenen Angaben mehr als 40 bolivianischen NGOs, die zu Klimawandel, Ressourcenausbeutung und Entwicklung arbeiten.*

Sheyla: »Mehr als eine Million Hektar Wald und Grasland sind bereits verbrannt. Die Regierung will aufforsten; manche Fachleute sagen, dass es 200 Jahre dauern wird, bis der Wald seine ökologischen Funktionen wieder ausüben kann – und vielleicht wird es nie wieder so ein Habitat für Flora und Fauna werden wie früher.

Sheyla:

» **Der Urwald ist verloren.** «

vvv045d **03Sep2019**

### **x001 Kipp-Punkte des Klimawandels; points of no-return**

Ein Kipp-Punkt ist ein Zeitpunkt in einer Entwicklung, an dem eine Veränderung eintritt, die nicht mehr rückgängig zu machen ist. Im Klimawandel kann dieses z.B. eintreten, wenn durch das Auftauen des Permafrosts so viel Methan und Lachgas freigesetzt werden, dass durch diese der Treibhaus-Effekt so stark aufgeheizt wird, dass immer mehr Methan und Lachgas freigesetzt werden und der Prozess sich selbst unterhält und aus einem Gleichgewichtszustand hinausführt.

Worte mit ähnlicher Bedeutung wie ‚Kipp-Punkte‘ sind:

**Kipp-Elemente, Punkte ohne Wiederkehr, Points of no-return, tipping elements, irreversible Änderungen, unkontrollierbare Effekte, Kettenreaktion, Schneeballeffekt, Venus-Effekt, Katastrophe im Sinne des Verlassens eines Gleichgewichts.**

Als die wichtigsten Beispiele für mögliche Kipp-Punkte im Klimawandel können wir die vorangehenden Fälle C – G von selbstverstärkenden Effekten nehmen, also

- C. den Albedo-Effekt
- D. die Versauerung der Weltmeere,
- E. das Verdampfen von Meerwasser,
- F. die Freisetzung von Methan und Lachgas aus dem Permafrostboden, Methan auch aus dem Meeresboden und dem Meerwasser
- G. das Verdorren und Abbrennen der Wälder.

Weitere Selbstverstärkungen und Kipp-Punkte im Klimasystem bespricht DIETER KASANG in seinem vorzüglichen Artikel. Er sagt: »Ein solches ‚Umkippen‘ stellt ein Risiko dar, bei dem der Schaden gewaltig, aber die Wahrscheinlichkeit des Eintretens unbekannt ist. « (vvv028) **02Dec2015**

Ob in einem oder mehreren dieser Beispiele ein Kipp-Punkt bereits erreicht ist, ist schwer zu beurteilen. TOMASZ KONICZ schreibt hierzu: »Der Sommer 2019 könnte als die große Umbruchzeit in die Menschheitsgeschichte eingehen, in der das Überschreiten der Kipp-Punkte des globalen Klimasystems evident wurde. « (vvv031) **03Jul2019**

Ob ein Kipp-Punkt bereits erreicht wurde, hängt davon ab, welche Möglichkeiten uns Menschen zur Verfügung stehen, den Prozess aufzuhalten, und ob diese Möglichkeiten auch genutzt werden. Nach der Nutzung unserer Möglichkeiten sieht es allerdings nicht aus.

Außerdem beeinflussen sich die selbstverstärkenden Effekte des Klimawandels und die Kipp-Punkte gegenseitig, d.h., wir können nicht einen Effekt allein betrachten; wir müssten in

Modellrechnungen alle Effekte zugleich berücksichtigen, was aber unmöglich ist, da viele Komponenten des Klimasystems nicht quantitativ abschätzbar sind.

*The Guardian*

(vww032) 18Jun2019

» Eine monströse wissenschaftliche Fehleinschätzung  
wurde etwa Mitte Juni aus der kanadischen Arktis gemeldet. «

»Das Auftauen des Permafrostbodens in vielen arktischen Regionen Kanadas schreitet viel schneller voran, als ursprünglich von der Klimawissenschaft prognostiziert. Der ökologisch verheerende Auftauprozess der seit Jahrmillionen gefrorenen Böden schreitet demnach viel schneller voran, als selbst die pessimistischsten wissenschaftlichen Studien annahmen. Demnach soll das Auftauen des Permafrosts inzwischen so weit vorangeschritten sein, wie es in den aktuellen Szenarien des Weltklimarates (IPCC) für das Jahr 2090 prognostiziert wurde. «

Originalarbeit: "Scientists shocked by Arctic permafrost thawing 70 years sooner than predicted"

**x002** Änderungen des Klimas können grundsätzlich 3 Ursachen haben:

1. Natürliche Einflüsse, wie z.B. Vulkanausbrüche, Einschläge von Asteroiden, Sonneneruptionen,
2. Anthropogenen Ursachen:
  - Verbrennen der fossilen Energieträger Kohle, Erdöl, Erdgas,
  - Abholzen der Wälder,
  - Raubbau an den Ackerflächen: Verödung fruchtbaren Bodens durch Überwirtschaftung,
  - Erzeugung und Freisetzung von Methan durch eine ungesunde Landwirtschaft und Viehzucht (Wiederkäuer, z.B., Kühe, produzieren viel Methan, Verfaulen von Laub und Abfällen),
  - Zerstörung des Ökosystems der Ozeane.

Die Mutter aller anthropogenen Ursachen ist die Übervölkerung des Planeten.

3. Spontane Änderungen = natürliche Schwankungen. Aufgrund der Instabilität des Systems können kleine Ursachen große Veränderungen herbeiführen.

**x003** Folgen des Klimawandels

Abschmelzen der Pole, Anstieg des Meeresspiegels, Verluste von Land an den Küsten, Versinken großer Weltstädte im Meer. Waldbrände, Verlust an landwirtschaftlicher Nutzfläche, Humus und Ernten, Versauerung der Meere, Mangel an Trinkwasser, Austrocknung von Flüssen, Dürren, Ausdehnung der Wüsten. Allgemeine Erwärmung mit Hitzewellen, Unwettern, Taifunen; Aussterben vieler Tier- und Pflanzenarten; neue Schädlinge und Krankheiten; Kriege um Ressourcen, gewaltige Migrationen, ...

**x004** Treibhausgase

Treibhausgase sind:

(vvv035, vvv044)

CO<sub>2</sub>, Methan, Lachgas, Stickoxyde NxOy (z.B. Abgase im Straßenverkehr), Ozon.

Treibhausgase sind stabil und verbleiben sehr lange Zeiten in den hohen Schichten der Atmosphäre.

Die wichtigsten Treibhausgase in einer Tabelle:

		Schädlich <sup>1)</sup>	Anteil <sup>2)</sup>	Dauer <sup>3)</sup>
CO <sub>2</sub>	Kohlendioxyd	1 x	60 %	120 J.
CH <sub>4</sub>	Methan	25 x	20 %	12 J.
N <sub>2</sub> O	Lachgas	300 x	6 %	120 J.
FKW	Fluorkohlenwasserstoffe	100-20 000 x	10 %	≥100 J.
O <sub>3</sub>	Ozon <sup>4)</sup>	...	...	...
H <sub>2</sub> O	Wasserdampf <sup>5)</sup>		62 %	

- 1) Schädlichkeit als Treibhausgas im Vergleich zu CO<sub>2</sub>,
- 2) Anteil am Menschen-gemachten (anthropogenen) Anteil des Treibhaus-Effekts, Stand 2019,
- 3) Lebensdauer in der Atmosphäre in Jahren,
- 4) Ozon ist ebenfalls ein Treibhausgas. Es hat aber besondere Eigenschaften; z.B. wird es in Erdnähe rasch, in den hohen Schichten der Atmosphäre aber langsam abgebaut. Zudem ist es ein Schutz der Erde vor den Ultraviolett-Strahlungen der Sonne, weshalb eine Verringerung des Ozons in den hohen Schichten für das Leben auf der Erde gefährlich wird (,Ozon-Loch‘). Wegen der speziellen Eigenschaften des Ozons lässt es sich nicht so einfach in die obige Tabelle einordnen. FCKW sind ein Ozon-Killer und zerstörten die Ozon-Schicht hoch in der Atmosphäre, sind jedoch jetzt unter Bann gestellt und werden weniger produziert, so dass Hoffnung besteht, dass sich die Ozonlöcher wieder schließen.
- 5) Wasserdampf ist nicht eigentlich ein Treibhausgas, trägt aber ebenso wie jene zur Erwärmung der Atmosphäre bei. Wasserdampf hat einen sehr hohen Anteil am Treibhauseffekt, der aber nicht anthropogen ist. Daher darf man den Wert von 62% nicht zu den Zahlen darüber hinzuzählen. Durch die Erwärmung der Luft verdampft mehr Meerwasser, was den stärksten aller Rückkopplung-Effekte darstellt. (vvv035, vvv044)

### x005 Einige Aussagen zum Klimawandel

<b>“Weltweit sind 17 Staaten, darunter Indien, von ,extrem hohem Wasserstress‘ betroffen.</b>	vvv043 <b>06Aug2019</b>
“17 Staaten droht Verwüstung” »Fast zwei Milliarden Menschen droht inzwischen das Wasser auszugehen. «	vvv043a <b>06Aug2019</b>
<b>“Das arktische Methan ist eine Zeitbombe!”</b>	uuu012 <b>03Aug2019</b>
<b>„Der deutsche Wald steht wegen des Klimawandels vor dem Kollaps“</b>	vvv022 <b>01Aug2019</b>
Der derzeitige Klimawandel ist in einer solchen globalen Form in der Erdgeschichte	vvv003a,b

noch niemals vorgekommen, nach einer Studie von Schweizer Wissenschaftlern		<b>24Jul2019</b>
Der derzeitige Klimawandel ist menschengemacht.	vvv034a, b	<b>24Jul2019</b>
Noch nie in den vergangenen 2000 Jahren hat es einen Klimawandel gegeben, der die gesamte Welt erfasste, so wie heute.	vvv034,a,b	<b>24Jul2019</b>
Die Tiere sind nicht in der Lage, sich schnell genug an den derzeitigen Klimawandel anzupassen.	vvv004	<b>23Jul2019</b>
„Verdammt, die Welt geht wirklich unter“, Essay von Raphael Thelen	vvv036	<b>21Jul2019</b>
Das arktische Eis ist instabiler und der Permafrostboden taut schneller auf als gedacht: »Neue Beobachtungen und Vorhersagen weisen darauf hin, dass Entscheider weniger Zeit haben als bisher gedacht, um auf die Folgen der Klimaveränderung zu reagieren. «	vvv008	<b>22Jun2019</b>
<b>„Die Wirklichkeit ist viel schlimmer als die Warnungen“</b> Jonas Schaible	vvv008	<b>22Jun2019</b>
Der Permafrost in der kanadischen Arktis ist jetzt schon so stark aufgetaut, wie es für 2090 vorhergesehen war.	vvv021	<b>18Jun2019</b>
Die Grönlandgletscher und das arktische Packeis schmelzen schneller ab, als die bisherigen Vorausberechnungen angegeben hatten	vvv006	IPCC03,3a <b>Mai2019</b>
„Kann ein Green New Deal den Klimawandel aufhalten?“	TOMASZ KONICZ	vvv030 <b>21May2019</b>
EU warnt vor dem Aussterben der Menschheit – entscheidendes Jahr ist 2030. ESPAS = European Strategy and Policy Analysis System”	ESPAS	vvv040a <b>10Apr2019</b>
<b>UNEP UN Environment Programme: “A graphic look at the changing Arctic”</b> Das schnellere Auftauen des Permafrostbodens und die dadurch erfolgte verstärkte Freisetzung von Methan können zu einem <b>Kipp-Punkt</b> des Klimawandels führen.		<b>27Mar2019</b> s. Kapitel <b>(x001)</b>
Die Wälder Kanadas speichern wegen Klimaschäden, Waldbränden, Insektenbefall und Abholzung weniger CO2 als bisher gedacht	vvv018	<b>24Feb2019</b>
Die Gletscher sind weltweit kleiner geworden als bisher vorausberechnet	vvv017	<b>11Feb2019</b>
Der Eisschild im Südwesten Grönlands schmilzt schneller ab als erwartet	vvv015	<b>05Feb2019</b>
Die Ozeane wärmen sich derzeit um 40% schneller auf als im Jahre 1990	vvv014	<b>10Jan2019</b>
Die globale Erwärmung schreitet schneller voran als gedacht	vvv013	<b>05Dec2018</b>
Die Weltmeere erwärmen sich schneller als bisher angenommen	vvv010	<b>31Oct2018</b>

## x006 Greta's Worte

Greta32

### Emotionale Rede beim UN-Klimagipfel im Wortlaut

23Sep2019

*greta:* »Meine Botschaft ist, dass wir Euch beobachten! Das hier ist alles falsch, ich sollte hier nicht sein, ich sollte zurück in der Schule sein auf der anderen Seite des Ozeans - aber Ihr kommt immer noch zu uns jungen Menschen, um Euch Hoffnung zu geben!

Wenn Ihr die Situation wirklich verstehen würdet und uns immer noch im Stich lassen würdet, dann wärt Ihr grausam und das weigere ich mich zu glauben. Wie könnt Ihr es wagen zu glauben, dass man das lösen kann, indem man so weiter macht wie bislang - und mit ein paar technischen Lösungsansätzen? Ihr seid immer noch nicht reif genug zu sagen, wie es wirklich ist.

Ihr lasst uns im Stich. Alle kommenden Generationen haben euch im Blick und wenn Ihr Euch dazu entscheidet, uns im Stich zu lassen, dann entscheide ich mich zu sagen: ‚Wir werden Euch das nie vergeben! Wir werden Euch das nicht durchgehen lassen!‘

Genau hier ziehen wir die Linie. Die Welt wacht auf und es wird Veränderungen geben, ob Ihr es wollt oder nicht. «

Der vollständige Text der Rede Greta's vor der UN findet sich auf Englisch unter [Greta32'](#)

Greta's Ansprache an ihre Anhänger weltweit am Welt-Klima-Tag am 20Sep2019 auf Englisch unter [Greta31](#)

Greta02

### Greta in Davos, Weltwirtschaftsforum

24Jan2019

Jahrestagung der Spitzenpolitiker und Wirtschaftsführer der Welt

Diese will die Aktivistin Greta Thunberg mit ihren Forderungen gegen den Klimawandel erreichen – mit drastischen Worten.

*Greta:* »Erwachsene sagen immer wieder: Wir sind es den jungen Leuten schuldig, ihnen Hoffnung zu geben. Aber ich will eure Hoffnung nicht.

**»Ich will, dass ihr in Panik geratet «**

dass ihr die Angst spürt, die ich jeden Tag spüre.

**»Ich will, dass ihr handelt, als würde euer Haus brennen. Denn es brennt! «**

»Die Zeit für Höflichkeiten ist vorbei. Jetzt ist es an der Zeit, deutlich zu sein. Die Klimakrise zu lösen, ist die größte und komplexeste Herausforderung, der die Menschheit je gegenüberstand. «

»Einige Leute, einige Unternehmen, vor allem einige Entscheidungsträger haben genau gewusst, welchen unbezahlbaren Wert sie opfern, um weiterhin unvorstellbare Mengen Geld zu verdienen. Und ich glaube, viele von Ihnen, die heute hier sind, gehören zu dieser Gruppe Menschen. «

Greta02 24Jan2019



greta04

Europäischer Wirtschafts- und Sozialausschuss

Brüssel, Belgien

21Jan2019

» **Wir haben begonnen, Euren Wirrwarr aufzuräumen,  
und werden nicht aufhören, bis wir fertig sind.** »

*greta:* »Wir streiken, weil wir unsere Hausaufgaben gemacht haben, machen es selbst und hören den Wissenschaftlern zu. «

»Wir wissen, dass die meisten Politiker nicht mit uns reden wollen. Nun, wir wollen auch nicht mit ihnen reden. «

»Wir wollen, dass sie mit den Wissenschaftlern sprechen, dass sie ihnen zuzuhören, denn wir wiederholen nur, was die Wissenschaftler seit Jahrzehnten sagen. Wir wollen, dass das Pariser Klimaabkommen und die Forderungen des Weltklimarates (IPCC) eingehalten werden. Wir haben keine weiteren Forderungen, als nur dem zu folgen, was die Wissenschaft sagt. «

»Ihr sagt uns, dass wir jung sind, aber wir haben keine Zeit zu warten, bis wir erwachsen sind und die Verantwortung übernehmen können. «

sagte Greta und zitierte den jüngsten IPCC-Bericht, der besagt, dass die Emissionen 2020 ihren Höhepunkt erreichen werden und dann stark sinken müssen, um die globale Erwärmung unter 1,5 Grad Celsius zu halten.

»Das ist nächstes Jahr. Ihr freut euch darauf, nicht mehr über die Klimakrise und andere Dinge zu sprechen, weil Ihr wisst, dass Ihr diesen Kampf nicht gewinnen könnt. Weil Ihr wisst, dass ihr eure Hausaufgaben nicht gemacht habt. Wir haben unsere Hausaufgaben gemacht, machen es selbst und hören den Wissenschaftlern zu. «

In einem Interview mit Efe erklärte Anuna De Wever, dass diese Aktionen allen Politikern des Landes zeigen sollen, dass sie eine "Klimageneration" sind und dass es um ihre Zukunft geht:

"Wir haben keine politische Farbe, wir wollen uns von jeder Partei distanzieren, es ist wichtig, der ganzen Welt zu zeigen, dass wir alle im Kampf gegen den Klimawandel vereint sind. «

greta04 21Jan2019

Greta00

Greta Thunberg, UN-Klimakonferenz, Katowice, Polen, 13Dec2019

13Dec2018

» **Die Älteren haben Chaos angerichtet** «

*Greta:* »Den Menschen ist nicht klar, dass wir uns in einer Krise befinden. Ich habe Politiker getroffen, die nicht mal Grundkenntnisse übers Klima haben. Sie kennen weder den **Albedo-Effekt** noch den **Venus-Effekt**, nicht einmal die **Keeling-Kurve**. Das ist beängstigend. Politiker oder auch Journalisten haben nicht die geringste Ahnung, was die Schicksalsfrage unserer Zeit angeht. «

Greta00 14Dec2018

Greta01

Greta Thunberg, UN-Klimakonferenz, Katowice, Polen, vollst. Rede

13Dec2018

» **Der Wandel kommt, ob es euch gefällt oder nicht** «

Übersetzung von Fabian Scheidler in Kontext TV. Englisches Original siehe [Greta27](#)

Die 15-jährige Greta Thunberg aus Schweden, die seit Monaten im Schulstreik für Klimagerechtigkeit protestiert, hat am 13. Dezember 2018 eine bewegende Rede vor dem Plenum der UN-Klimakonferenz in Katowice (Polen) gehalten:

»Unsere Zivilisation wird dafür geopfert, dass eine sehr kleine Anzahl von Menschen weiterhin enorme Mengen von Geld machen kann. «

Greta: »Meine Name ist Greta Thunberg. Ich bin 15 Jahre alt und komme aus Schweden. Ich spreche für die Organisation „Climate Justice Now!“

Viele Leute sagen, dass Schweden nur ein kleines Land ist und es keine Rolle spielt, was wir tun. Aber ich habe gelernt, dass man nie zu klein ist, um einen Unterschied zu machen. Und wenn ein paar Kinder weltweit Schlagzeilen damit machen können, nur indem sie nicht zur Schule gehen, dann kann man sich vorstellen, was wir alle zusammen erreichen könnten, wenn wir nur wollten.

Aber um das zu tun, müssen wir klare Worte sprechen, egal wie unbequem das sein mag. Ihr hier spricht nur von ewigem grünem Wirtschaftswachstum, weil ihr zu viel Angst davor habt, unbeliebt zu sein. Ihr sprecht nur darüber, mit denselben schlechten Ideen weiter zu machen, die uns in dieses Chaos gebracht haben, selbst wenn es das einzig Vernünftige ist, die Notbremse zu ziehen. Ihr seid nicht reif genug, um zu sagen, was wirklich ist. Auch noch diese Last bürdet ihr uns Kindern auf.

Aber mir ist es egal, ob ich beliebt bin. Ich Sorge mich um Klimagerechtigkeit und den lebendigen Planeten. Unsere Zivilisation wird dafür geopfert, dass eine sehr kleine Anzahl von Menschen weiterhin enorme Mengen von Geld machen kann. Unsere Biosphäre wird geopfert, damit reiche Menschen in Ländern wie meinem in Luxus leben können. Es sind die Leiden der vielen, die für den Luxus der wenigen bezahlen.

Im Jahr 2078 werde ich meinen 75. Geburtstag feiern. Falls ich Kinder haben sollte, werden sie vielleicht diesen Tag mit mir verbringen. Vielleicht werden sie mich nach euch fragen. Vielleicht werden sie fragen, warum ihr nichts getan habt, als noch Zeit zum Handeln war.

»Ihr sagt, ihr liebt eure Kinder über alles, und doch steht ihr ihnen die Zukunft vor ihren Augen. «

Solange ihr euch nicht darauf konzentriert, was notwendig ist, sondern nur darauf, was politisch möglich ist, gibt es keine Hoffnung. Wir können eine Krise nicht lösen, ohne sie als Krise zu behandeln. Wir müssen die fossilen Brennstoffe im Boden lassen und wir müssen uns auf Gerechtigkeit konzentrieren. Und wenn Lösungen innerhalb des Systems unmöglich zu finden sind, dann müssen wir vielleicht das System selbst verändern.

Wir sind nicht hergekommen, um die führenden Politiker der Welt anzubetteln, dass sie sich kümmern sollen. Ihr habt uns in der Vergangenheit ignoriert und ihr werdet uns wieder ignorieren. Euch gehen die Ausreden aus, und uns läuft die Zeit davon. Wir sind hergekommen, um euch zu sagen, » **dass der Wandel kommen wird, ob es euch gefällt oder nicht.** «

Die wirkliche Macht gehört den Menschen. Danke. «

Greta01 13Dec2018

Greta03 School strike for climate

TEDxStockholm am 24Nov2018

» **Rettet die Welt, indem Ihr die Regeln ändert !** «

Text hier auf Deutsch, Original war Swedish. Englisch = Greta07.

TEDx is an open-source community of independently organized events that inspire like-minded people.

*Greta:* Als ich ungefähr 8 Jahre alt war, hörte ich zum ersten Mal vom Klimawandel und von globaler Erwärmung. Offenbar hatten das Menschen durch ihre Lebensweise gemacht. Mir wurde gesagt, ich solle das Licht ausmachen, um Energie zu sparen, und Papier wiederverwenden, um Ressourcen zu sparen.

Ich erinnere mich, dass ich es sehr seltsam fand, dass Menschen, die eine Tierart von vielen sind, dazu fähig sind, das Erdklima zu verändern. Denn wenn wir es wären und es tatsächlich geschah, dann würden wir doch über nichts anderes mehr sprechen.

Im Fernsehen würde es nur darum gehen. Schlagzeilen, Radio, Zeitungen – wir würden von nichts anderem hören oder lesen, so als wäre ein Weltkrieg ausgebrochen. Aber niemand sprach darüber. Wenn das Verbrennen fossiler Brennstoffe so schädlich war, dass es unsere Existenz bedrohte, wie konnten wir dann so weitermachen wie bisher? Warum gab es keine Beschränkungen? Warum wurde es nicht verboten? Für mich ergab das keinen Sinn. Es war zu unwirklich.

Mit 11 Jahren wurde ich krank. Ich bekam Depressionen. Ich hörte auf zu sprechen und zu essen. Innerhalb von zwei Monaten verlor ich etwa 10 kg Gewicht. Später bekam ich die Diagnose Asperger-Syndrom, Zwangsstörungen und selektiver Mutismus.

Im Grunde bedeutet es, dass ich nur spreche, wenn ich es für nötig halte. Jetzt ist einer dieser Momente. (Lachen) (Applaus)

Für Menschen mit einer Form von Autismus ist fast alles schwarz oder weiß. Wir können nicht gut lügen und meist nehmen wir ungern am sozialen Leben teil, das alle anderen so zu mögen scheinen. (Lachen)

In vielerlei Hinsicht scheinen Autisten die Normalen und die anderen ziemlich seltsam zu sein. (Lachen)

Besonders beim Thema Nachhaltigkeit, über das jeder sagt, der Klimawandel sei eine existentielle Bedrohung und das wichtigste Thema von allen, machen alle weiter wie bisher. Ich verstehe das nicht, denn wenn Emissionen gestoppt werden müssen, dann müssen wir sie stoppen. Ich sehe das schwarz-weiß. Es gibt keine Grauzonen, wenn es um das Überleben geht.

»**Entweder bestehen wir als Zivilisation weiter oder nicht.**«

Wir müssen uns ändern! Reiche Länder wie Schweden müssen anfangen, die Emissionen wenigstens um 15 % pro Jahr zu verringern. Nur so bleiben wir unter einer Erwärmung von 2 Grad. Doch wie der Weltklimarat kürzlich zeigte, könnten wir mit einem Ziel von 1,5° Celsius stattdessen die Folgen für das Klima deutlich reduzieren.

Wir können uns denken, was das für die Verringerung von Emissionen bedeutet. Man sollte meinen, die Medien und sämtliche Politiker würden über nichts anderes reden. Aber sie erwähnen es nicht einmal. Auch nicht, dass Treibhausgase bereits im System eingeschlossen sind. Oder dass Luftverschmutzung eine Erwärmung versteckt, so dass wir beim Verbrennungsstopp fossiler Brennstoffe bereits eine zusätzliche Erwärmung von vielleicht sogar 0,5 bis 1,1° Celsius haben.

Außerdem spricht kaum jemand darüber, dass wir uns mitten im sechsten Massenaussterben befinden. Bis zu 200 Arten sterben tagtäglich aus. Arten sterben heute 1.000-mal bis 10.000-mal schneller aus als normal.

Auch spricht kaum jemand über den Aspekt der Klimagerechtigkeit, welche im Pariser Abkommen überall erwähnt wird und die absolut erforderlich ist, damit es global funktioniert. Es bedeutet, reiche Länder müssen ihre Emissionen innerhalb von 6 bis 12 Jahren auf Null reduzieren.

So bekommen Menschen in ärmeren Ländern die Chance, ihren Lebensstandard durch den Aufbau einer Infrastruktur zu verbessern, die wir bereits haben, wie Straßen, Schulen, Krankenhäuser, sauberes Trinkwasser, Elektrizität und so weiter.

Denn wie können wir von Ländern wie Indien oder Nigeria verlangen, sich um die Klimakrise zu kümmern, wenn wir, die schon alles haben, uns keine Sekunde darum kümmern oder um unsere konkreten Zusagen zum Pariser Abkommen?

Warum also reduzieren wir unsere Emissionen nicht? Warum steigen sie stattdessen immer noch? Verursachen wir absichtlich ein Massenaussterben? Sind wir böse? Nein, sicher nicht.

Die Menschen machen weiter, weil ein Großteil keine Ahnung vor den Folgen unseres Alltagslebens hat. Sie wissen nicht, dass ein schneller Wandel notwendig ist. Wir alle denken, wir wüssten es, und wir alle denken, jeder wüsste es, aber so ist es nicht. Wie könnten wir das auch?

Wenn es wirklich eine Krise gäbe, die durch unsere Emissionen verursacht würde, müssten man wenigstens einige Anzeichen sehen. Nicht nur überflutete Städte, zehntausende Tote und ganze Länder voller Trümmer aus abgerissenen Gebäuden. Man würde Beschränkungen sehen. Aber nein. Und niemand spricht darüber. Es gibt keine Notfallversammlungen, keine Schlagzeilen, keine aktuellen Nachrichten.

Niemand handelt, als wären wir in einer Krise. Sogar die meisten Klimaforscher und grünen Politiker fliegen rund um die Welt, essen Fleisch und Milchprodukte. Wenn ich 100 Jahre alt werde, werde ich im Jahr 2103 leben. Wenn Sie heute über die Zukunft nachdenken, denken Sie nicht über das Jahr 2050 hinaus. Im besten Fall habe ich dann nicht einmal die Hälfte meines Lebens hinter mir. Was geschieht danach?

Im Jahr 2078 feiere ich meinen 75. Geburtstag. Wenn ich Kinder oder Enkelkinder habe, verbringen sie vielleicht den Tag mit mir. Vielleicht fragen sie mich nach Ihnen, den Menschen, die im Jahr 2018 lebten. Vielleicht fragen sie, warum Sie nichts taten, als Ihnen noch Zeit dafür blieb.

Was wir jetzt tun oder nicht tun, betrifft mein ganzes Leben und das Leben meiner Kinder und Enkelkinder. Was wir jetzt tun oder nicht tun, können ich und meine Generation in Zukunft nicht ungeschehen machen.

Also beschloss ich zum Schulbeginn im August, dass es jetzt reicht. Ich setzte mich vor dem schwedischen Parlament auf den Boden. Ich machte Schulstreik für das Klima. Manche Leute sagen, ich solle stattdessen zur Schule gehen. Manche Leute sagen, ich solle lernen, damit ich als Klimaforscherin ‚die Klimakrise lösen‘ kann.

Aber die Klimakrise ist bereits gelöst. Wir kennen alle Fakten und die Lösungen. Wir müssen nur noch aufwachen und etwas ändern. Und warum soll ich für eine Zukunft lernen, die bald nicht mehr da ist, wenn niemand etwas tut, um diese Zukunft zu retten?

Was bringt es, Fakten im Schulsystem zu lernen, wenn die wichtigsten Fakten, die von der Wissenschaft aus dem gleichen Schulsystem kommen, offensichtlich nichts für unsere Politiker und unsere Gesellschaft bedeuten?

Einige Leute sagen, Schweden sei nur ein kleines Land und es spiele keine Rolle, was wir tun. Aber wenn ein paar Kinder weltweit Schlagzeilen machen können, nur weil sie einige Wochen nicht zur Schule gehen, stellen Sie sich vor, was wir zusammen tun könnten, wenn wir wollen. (Applaus)

Jetzt sind wir fast am Ende meiner Rede und hier fangen die Meisten an, über Hoffnung zu reden: Solarmodule, Windkraft, Kreislaufwirtschaft und so weiter, aber ich werde das nicht tun.

Es gab 30 Jahre lang Aufmunterungen und positive Ideen. Es tut mir leid, aber es funktioniert nicht. Hätte es funktioniert, wären die Emissionen inzwischen zurückgegangen. Sie sind es aber nicht. Ja, wir brauchen Hoffnung, sicher brauchen wir sie. Aber noch mehr als Hoffnung brauchen wir Taten. Sobald wir handeln, ist Hoffnung überall. Statt also nach Hoffnung zu suchen, suchen Sie nach Handlungsmöglichkeiten. Dann, und nur dann, wird Hoffnung kommen. Heute verbrauchen wir tagtäglich 100 Millionen Barrel Öl. Die Politik ändert daran nichts. Es gibt keine Regeln, das Öl im Boden zu lassen.

**» Wir können die Welt nicht retten, indem wir die Regeln einhalten,  
denn die Regeln müssen geändert werden.**

**Alles muss sich ändern. Und es muss heute beginnen. «**

Vielen Dank. (Applaus und Jubel)

Greta03 24Nov2018

Greta05 Greta vor dem schwedischen Parlament, mit dem Schild „Skolstreik för Klimatet“

» Ich mache das, weil ihr Erwachsenen auf meine Zukunft scheißt. «

Aug2018

**x007** Some more statements on climate change

<p><b>IPCC06</b> „Special Report on the Ocean and Cryosphere in a Changing Climate“</p> <p>For this Special Report, more than 100 scientists from more than 30 countries assessed the latest scientific knowledge about the physical science basis and impacts of climate change on ocean, coastal, polar and mountain ecosystems, and the human communities that depend on them. Their vulnerabilities as well as adaptation capacities were also evaluated. Options for achieving climate-resilient development pathways were presented as well.</p>	<p>‘SROCC’</p> <p>25Sep2019</p> <p>Overlook</p>
<p><b>IPCC06b</b> IPCC Press Release (on IPCC06)</p> <p>» Choices made now are critical for the future of our ocean and cryosphere. «</p>	<p>25Sep2019</p>
<p><b>IPCC06c</b> IPCC Summary for Policymakers <b>Headline Statements</b></p> <p><i>Startup Box: The importance of the ocean and cryosphere for people</i></p> <p>All people on Earth depend directly or indirectly on the ocean and cryosphere.</p>	<p>25Sep2019</p>

<p>The global ocean covers 71% of the Earth surface and contains about 97% of the Earth’s water. The cryosphere refers to frozen components of the Earth system.</p> <p>Around 10% of Earth’s land area is covered by glaciers or ice sheets. The ocean and cryosphere support unique habitats, and are interconnected with other components of the climate system through global exchange of water, energy and carbon. The projected responses of the ocean and cryosphere to past and current human-induced greenhouse gas emissions and ongoing global warming include climate feedbacks, changes over decades to millennia that cannot be avoided, thresholds of abrupt change, and irreversibility.</p> <p>Human communities in close connection with coastal environments, small islands (including Small Island Developing States, SIDS), polar areas and high mountains are particularly exposed to ocean and cryosphere change, such as sea level rise, extreme sea level and shrinking cryosphere. Other communities further from the coast are also exposed to changes in the ocean, such as through extreme weather events. Today, around 4 million people live permanently in the Arctic region, of whom 10% are Indigenous. ...</p> <p><i>Observed Physical Changes:</i> A1. Over the last decades, global warming has led to widespread shrinking of the cryosphere, with mass loss from ice sheets and glaciers, reductions in snow cover (high confidence) and Arctic sea ice extent and thickness, and increased permafrost temperature. ...</p>	
--	--

<p>IPCC05a</p>	<p>UN climate change report calls for change to human diet”  <b>“Eat less meat!”</b></p>	<p>09Aug2019</p>
<p>IPCC05</p>	<p><b>“Land is a Critical Resource”</b> Press Release</p>	<p>08Aug2019</p>
<p><b>BBC</b> <b>“Climate change: 12 years to save the planet? Make that 18 months ! ”</b></p> <p>»Last year, the Intergovernmental Panel on Climate Change (IPCC) reported that to keep the rise in global temperatures below 1.5 °C this century, emissions of carbon dioxide would have to be cut by 45% by 2030. « (IPCC03, May2019)</p> <p>»Last December, [2018] the US, Saudi Arabia, Kuwait and Russia blocked the IPCC special report on 1.5 °C from UN talks. « (IPCC03, May2019)</p> <p>»But today, observers recognize that the decisive, political steps to enable <b>the cuts in carbon to take place will have to happen before the end of next year.</b></p> <p><i>Hans Joachim Schellnhuber, founder and now director emeritus of the Potsdam Climate Institute:</i></p> <p>»The climate math is brutally clear: While the world can't be healed within the next few years, it may be fatally wounded by negligence until 2020. «</p> <p><i>Prince Charles:</i> »I am firmly of the view that <b>the next 18 months</b> will decide our ability to keep climate change to survivable levels and to restore nature to the equilibrium we need for our survival. «</p>	<p><b>24Jul2019</b>  vvv024</p> <p>[2020]</p> <p>(vvv024)</p>	

<p><b>Greenland Ice Sheet Today:</b> “A record melt event in mid-June 2019”</p>	<p>vvv007 <b>20Jun2019</b></p>
<p><b>The Arctic:</b> “Scientists shocked by Arctic permafrost thawing 70 years sooner than predicted”</p>	<p>vvv032 <b>18Jun2019</b></p>
<p><b>The Arctic:</b> Climate Change Drives Widespread and Rapid Thermokarst Development in Very Cold Permafrost in the Canadian High Arctic”          [Thermokarst is a land surface characterised by very irregular surfaces of marshy hollows and small hummocks formed as ice-rich permafrost thaws.]          [Thermokarst ist eine Landformung durch oberflächlich auftauende Dauerfrostböden.]</p>	<p>vvv033 <b>10June2019</b></p>
<p><b>ESPAS</b> European Strategy and Policy Analysis System,          Department of the European Parliament</p> <p>»An increase of 1.5 degrees is the maximum the planet can tolerate; should temperatures increase further beyond 2030, we will face even more droughts, floods, extreme heat and poverty for hundreds of millions of people; the likely demise of the most vulnerable populations</p> <p style="text-align: center;">» ... and at worst, the extinction of humankind altogether. «</p> <p style="text-align: center;"><i>Foreword by Ann Mettler, Chair: »The Future is now! «</i></p> <p>»The next decade will be defining for the future of Europe and Europe’s role in the world. «</p> <p>»Tomorrow’s challenges and opportunities are determined by today’s choices. «</p>	<p><b>05Apr2019</b></p>
<p><b>IPSO-Report:</b> “Eight urgent fundamental and simultaneous steps needed to restore ocean health, and the consequences for humanity and the planet of inaction or delay”</p>	<p>vvv029 <b>2019</b></p>
<p><b>UNEP UN Environment Programme: “A graphic look at the changing Arctic”</b></p> <p>»Change is clearly accelerating in the Arctic, and it has global implications for us all. «</p> <p>»Rising temperatures in the Arctic [are] twice the global average. «</p> <p>»The Arctic and the rest of the world will be a very different place in the decades to come. «</p> <p>»New evidence suggests that permafrost is thawing much faster than previously thought, with consequences not just for Arctic peoples and ecosystems, but for the planet as a whole because of feedback loops. «</p> <p>» More Greenhouse Gases entering the atmosphere will lead to further warming, which in turn will lead to even more thawing, in a process known as ‘positive feedback’. «</p>	<p><b>27Mar2019</b></p>

**x008** Some more words of Greta's in English

**greta32' Greta Thunberg's Speech at the U.N. Climate Action Summit**

**23Sep2019**

Climate activist Greta Thunberg, 16, addressed the U.N.'s Climate Action Summit in New York City on Monday. Here's the full transcript of Thunberg's speech, beginning with her response to a question about the message she has for world leaders.

*greta:* »My message is that we'll be watching you.

This is all wrong. I shouldn't be up here. I should be back in school on the other side of the ocean. Yet you all come to us young people for hope. How dare you!

You have stolen my dreams and my childhood with your empty words. And yet I'm one of the lucky ones. People are suffering. People are dying. Entire ecosystems are collapsing. We are in the beginning of a mass extinction, and all you can talk about is money and fairy tales of eternal economic growth. How dare you!

For more than 30 years, the science has been crystal clear. How dare you continue to look away and come here saying that you're doing enough, when the politics and solutions needed are still nowhere in sight.

You say you hear us and that you understand the urgency. But no matter how sad and angry I am, I do not want to believe that. Because if you really understood the situation and still kept on failing to act, then you would be evil. And that I refuse to believe.

The popular idea of cutting our emissions in half in 10 years only gives us a 50% chance of staying below 1.5 degrees [Celsius], and the risk of setting off irreversible chain reactions beyond human control.

Fifty percent may be acceptable to you. But those numbers do not include tipping points, most feedback loops, additional warming hidden by toxic air pollution or the aspects of equity and climate justice. They also rely on my generation sucking hundreds of billions of tons of your CO<sub>2</sub> out of the air with technologies that barely exist.

So a 50% risk is simply not acceptable to us — we who have to live with the consequences.

To have a 67% chance of staying below a 1.5 degrees global temperature rise – the best odds given by the [Intergovernmental Panel on Climate Change] – the world had 420 gigatons of CO<sub>2</sub> left to emit back on Jan. 1st, 2018. Today that figure is already down to less than 350 gigatons.

How dare you pretend that this can be solved with just 'business as usual' and some technical solutions? With today's emissions levels, that remaining CO<sub>2</sub> budget will be entirely gone within less than 8 1/2 years.

There will not be any solutions or plans presented in line with these figures here today, because these numbers are too uncomfortable. And you are still not mature enough to tell it like it is.

You are failing us. But the young people are starting to understand your betrayal. The eyes of all future generations are upon you. And if you choose to fail us, I say: We will never forgive you.



We will not let you get away with this. Right here, right now is where we draw the line. The world is waking up. And change is coming, whether you like it or not.

"Thank you."

greta32 23Sep2019

Greta31' **Greta Thunberg Addresses Hundreds of Thousands at NYC Climate Strike**

20Sep2019

Sixteen-year-old Swedish activist Greta Thunberg spoke at Friday's climate strike in New York, where an estimated 300,000 people took to the streets. Thunberg inspired the global spread of weekly climate strikes when she started skipping school to protest outside of the Swedish parliament last year. "We will not just stand aside and watch," Thunberg told a crowd of thousands in her speech at Manhattan's Battery Park. "We are united behind the science, and we will do everything in our power to stop this crisis from getting worse."

*Alexandria Villaseñor (14 years old):* It is my honor to introduce Greta Thunberg!

*Greta Thunberg:* Hello, New York City. It is an honor for me to be here with all of you today on this historical day. People are striking today in over 150 countries, on all continents. And when I say all continents, I mean all continents, even Antarctica. Even on Antarctica, people are striking. And we are not in school today. And this time, we are not alone. We have some adults who are not at work today, either.

And why? Because this is an emergency. Our house is on fire. And it's not just the young people's house. We all live here. It affects all of us. And we will not just stand aside and watch. We are united behind the science, and we will do everything in our power to stop this crisis from getting worse, even if that means skipping school or work, because this is more important. Why should we study for a future that is being taken away from us, that is being stolen for profit? And some people say we should study to become climate scientists or politicians, so that we can, in the future, solve the climate crisis. But by then, it will be too late. We need to do this now!

This Monday, world leaders are going to be gathered here in New York City for the United Nations Climate Action Summit. The eyes of the world will be on them. They have a chance to prove that they, too, are united behind the science. They have a chance to take leadership to prove they actually hear us. Do you think they hear us?

*Climate Strikers:* No!

*Greta:* We will make them hear us.

*Climate Strikers:* Greta! Greta! Greta! Greta! Greta! Greta! Greta! Greta! Greta! Greta! Greta! Greta! Greta!

*Greta:* We have not taken to the streets, sacrificing our education, for the adults and politicians to take selfies with us and tell us that they really, really admire what we do. We are doing this to wake the leaders up. We are doing this to get them to act. We deserve a safe future. And we demand a safe future. Is that really too much to ask?

*Climate Strikers:* No!

*Greta:* Right now we are the ones who are making a difference. If no one else will take action, then we will. It should not be that way. We should not be the ones who are fighting for the future. And yet, here we are. But we are not just some young people skipping school or some adults who are not going to work. We are a wave of change. Together and united, we are unstoppable. This is what people power looks like. We will rise to the challenge. We will hold those who are the most responsible for this crisis accountable, and we will make the world leaders act. We can, and we will. And if you belong to that small group of people who feel threatened by us, then we have some very bad news for you, because this is only the beginning. Change is coming, whether they like it or not.

*Amy Goodman:* Sixteen-year-old Swedish climate activist Greta Thunberg speaking on Friday at the Global Climate Strike in New York. Today she's addressing the U.N. Climate Action Summit. Yes, at the United Nations, she's addressing the U.N. General Assembly.

greta31 20Sep2019

Greta15

Climate Activist Greta Thunberg Arrives in NYC to Fight ...

29Aug2019

### “ Biggest Crisis Humanity Has Ever Faced ”

**Interview together with Amy Goodman, Xiye Bastida, Alexandria Villaseñor, Svante Thunberg at Greta's arrival in New York 29 Aug 2019**

*Amy Goodman:* After weeks of anticipation, the Swedish climate justice activist Greta Thunberg arrived on the shores of Lower Manhattan Wednesday afternoon after a two-week voyage across the Atlantic Ocean in an emissions-free yacht. Greta Thunberg was welcomed on land by more than a thousand supporters and reporters at the North Cove Marina. As Greta's yacht sailed over the horizon and past the Statue of Liberty, youth climate activists chanted “The sea levels are rising, and so are we!” and “We are unstoppable! Another world is possible!” The 16-year-old began her journey to the U.S. in southwestern England. Greta Thunberg doesn't fly. She chose to make the journey from Europe to the U.S. aboard the Malizia II, a 60-foot racing yacht covered in solar panels.

The young climate activist is kickstarting a months-long tour of the Americas. For her first action, she'll be joining New York students climate-striking outside the U.N. Friday morning. She will then take to the streets for a massive climate march in New York City September 20th, followed by two U.N. climate summits here. In December, she'll attend the COP25 climate summit in Santiago, Chile.

Greta Thunberg became an international icon of resistance last year, when she began skipping classes to stand outside the Swedish parliament demanding her government take action to confront the climate crisis. Her weekly protest inspired millions, sparking a global movement of student strikes for climate.

This is Greta Thunberg speaking just minutes after docking in Lower Manhattan on Wednesday.

*Greta:* I want to thank everyone so much, everyone who is here and everyone who is involved in this climate fight, because this is a fight across borders, across continents. And it's – as you said, it is insane that a 16-year-old had to cross the Atlantic Ocean to make a stand and to – and this, of

course, is not something that I want everyone to do. The climate and ecological crisis is a global crisis and the biggest crisis humanity has ever faced. And if we don't manage to work together, to cooperate, and to work together despite our differences, then we will fail. So we need to stand together and support each other and to take action, because, otherwise, it might be too late. So, let's not wait any longer. Let's do it now, yes.

*Amy* : After her brief opening remarks, Greta Thunberg answered questions from reporters. One asked if she had heard about the raging wildfires in the Amazon rainforest in Brazil and Bolivia, causing unprecedented damage and destroying large swaths of land.

*Greta*: Yes. Even on a sailboat in the middle of the Atlantic Ocean, I heard about the forests in the Amazon rainforest – the fires in the Amazon rainforest, yeah. And it is, of course, devastating, and it's so horrible. It's hard to imagine. So, I mean, we need to – I mean, this is a clear sign that we need to stop destroying nature, and we need – and our war against nature must end. And, I mean, the Amazon is such a key to addressing the climate crisis and the ecological crisis.

*Amy* : Amy Goodman from Democracy Now! How are you? So, President Trump says oil and gas are the source of America's wealth. Windmills cause cancer, he says. What is your answer to him? And to the activists who have come to greet you here and who are looking for a message from you all over this country, the historically greatest fossil fuel emitter, what do you say to them?

*Greta*: I mean, of course, oil and gas has its ups and downs. And we need to sort of realize the consequences from a bigger perspective of what it actually does when we use it the way we use it today. And I'm pretty sure windmills doesn't cause cancers. «

»And the second question, my message to all the activists: to just keep going. And I know it's ... it may seem impossible and hopeless sometimes. It always does. So, you just have to continue, because if you try hard enough and long enough, you will make a difference. And if enough people stand together, fight for the right thing, then anything can happen.

*Amy* : Greta Thunberg was welcomed Wednesday by hundreds of young climate activists. One of them asked Greta how old she was when she became an activist.

*Greta*: I first heard about – I found out about this issue when I was maybe 7, 8 or 9 years old. And then I realized that, oh, this is actually very bad. And I started to read about it more and more. And when I became maybe 11, I became depressed. And the climate crisis was a huge cause of that, and because I just felt that everything is hopeless and there's nothing we can do and no one is doing anything.

But then I sort of got out of that depression by promising myself that I'm going to do everything I can to change things. And that is what I tried to do. And I started to go to marches and demonstrations and to join organizations and things like that. But I still thought things were too slow, that nothing was really changing. So I was desperate, in a way, to try to do something, just anything. And then this idea of school striking came up. And then I thought, yeah, I might just as well try that and see if it works. And if it doesn't, then I will try something else. And then I did it, and then it became huge very quickly.

*Amy* : Greta Thunberg was then asked about her plans through December.

*Greta*: I am definitely coming to Chile, as it looks now. And I am going to try to get there, of course, without flying, so there will be a lot of trains, buses, and probably even sailing, as well. I will

figure that out as time goes by. And from COP25, I expect – I mean, that must be some kind of breaking point. This United Nations Climate Action Summit in September now and the COP25, these two have to be a tipping point. ... I and many people with me are going to try to do everything we can to make sure that the world leaders have all eyes on them during these conferences, so that they cannot continue to ignore this.

*Amy* : With that, Greta Thunberg left the stage to rest, she said. Again, on Friday, she'll be outside the U.N., joining young climate activists protesting around the climate. And then the major September 20th climate march, she'll participate in New York, a U.N. Youth Climate Summit on September 21st at the United Nations, and then the major U.N. climate summit in New York on September 23rd. She'll go through the Americas and end up at the COP25, the U.N. climate summit in Santiago, Chile, in December. Democracy Now! will be there covering the summit.

After Greta Thunberg spoke, we were able to catch up with her father, Svante Thunberg, whom we first met last year in Poland at the U.N. climate summit. I asked him about Greta's decision to make this trip by sailboat.

*Svante Thunberg*: It's amazing to have arrived in New York. So, we've made a special journey, a very – it's been a huge opportunity. I mean, since Greta decided that she wanted to sail, that was the way she wanted to do it. I mean, you cannot win. She sort of says, you know, "I'm going to be hated, whatever I do, and someone's always going to find fault in whatever I do. But, you know, this is my choice." And this is the compromise she was going to go with. Then she decided, then it's no stopping her. I mean, we – and she feels very completely at ease, you can tell. And once we got to the boat, she was, I mean, completely calm all the time. I was freaking out a little bit, I must admit.

*Amy* : And explain why she took a boat.

*Svante*: Well, she didn't want to fly, because if she would have flown, you know, people would have come down on her for that.

*Amy* : Because of the carbon footprint.

*Svante*: Yes, of course, and for being a hypocrite. And then we looked at freighter ship travel, which also, I mean, some people would say, would argue, is a better choice. But then again, I mean, the emissions from the freighter ship boats are enormous, so she would be enormously hated for that, too. So then she landed on the sailing idea. And we tried so many different sailing boats, because they're not very easy to find, but also a lot of them use a lot of diesel to make these trips, huge amounts of diesel. And then we were offered this trip, and she sort of said, "Yeah, this is how it's going to be done. And ..."

*Amy* : Why does the boat consume so little energy?

*Svante*: Well, because they're very keen on it. I mean, the crew are very active on the subject. They really fight for the climate, and they really are involved in the climate movement. So, I mean, they fitted the boat with solar panels and hydropower, which is the only one of its kind. I mean, there's literally no other boat that can do that. There might be some private small boats, you know, but

they all take probably like three months to cross the Atlantic. And so, they came to us. And that was also a very important thing. So, I mean, they believed in what she was doing.

And once we got going, she was completely at ease. And that was amazing for me to see. And then, of course, I felt at ease. And we had, you know, a great time in this sometimes very crazy environment of this boat, which is incredibly fast. It goes up to 30 knots, which is hard to imagine. And you try to sleep inside of that. It's like – I don't know. It's a surreal experience. We tried to film it, but you can't. You cannot sort of fathom. You cannot. It's just – it's just you have to do it. And the sound is completely mad. Completely mad. But she kept – she fell asleep straightaway. And she ate, watched the ocean. And we were just happy. So, it was a great, great time.

*Amy* : Svante Thunberg is the father of Greta Thunberg. He made the ocean voyage with her. When they landed, Greta was greeted by over a hundred American climate youth strikers. I spoke with Xiye Bastida, one of the organizers of Fridays for Future New York City, but began by asking her fellow activist, 14-year-old Alexandria Villaseñor, what kind of response their strike has received.

*Alexandria Villaseñor* : The response I've gotten striking has been really supportive, from Greta Thunberg herself and having students in New York City come out and strike, and are getting more involved. And students for Fridays for Future New York City, we are going to continue striking. On September 20th, it is going to be the next global climate strike, and it will be the Friday before world leaders come to New York City for the United Nations climate summit. So we're sending a message to world leaders that they take bold climate action for our future.

*Amy* : And what do you have to say to President Trump, who denies climate change exists?

*Alexandria* : Really, my message to any world leader is that they have to start taking the climate crisis seriously, or else my generation will continue demanding that they do.

*Amy* : And what do you have to say to politicians who say, "Well, you're 14. You're too young to vote. Why should we listen to you?"

*Alexandria* : Just like Greta Thunberg says, you're never too small to make a difference. And that's why this movement is so strong, is because hundreds of students are striking, and we're all – you know, we're striking because we don't have a voice, because we can't vote. And striking is one of the best ways to get our voices heard.

*Climate Justice Activists* : Unite behind the science! Unite behind the science! Unite behind the science!

*Xiye Bastida* : My name is Xiye Bastida. I am a 17-year-old climate justice activist. And I am originally from Mexico. And I have been leading most of the strikes in New York City with Fridays for Future. So, we've been organizing for the March 15th strike, the May 3rd strike, the May 24th strike and now the September 20th climate strike.

*Amy* : And what does this moment mean to you right now? Why are you here at the marina?

*Xiye* : So, I think this is a very important moment because America, as a whole, has been behind climate consciousness, so we need somebody who is going to come and really tell everyone to wake up.

And it's very important that we are having the U.N. climate summit, because that's us, young people, speaking to our world leaders about how this is an intergenerational crisis that requires intergenerational cooperation.

*Amy* : So, tell us where you're originally from.

*Xiye*: So, I'm originally from a town called San Pedro Tultepec in Mexico. I was born and raised in Mexico, and I moved to New York four years ago. So, in 2015, my town was affected by flooding. And that's what moved my family to move out of Mexico into New York City. And when I got to New York City, I saw the effects that Hurricane Sandy had had on the community, and I realized that the climate crisis follows you everywhere.

*Amy* : So, you're leading the strikes at Beacon High School, one of the public high schools here in New York. How did you get involved in activism, climate activism?

*Xiye*: So, to that, I say there is many aspects to the climate crisis. It's not only about our planet heating up, but it's about pollution. It's about air pollution, water pollution, plastic pollution. So, if you don't believe that we are going through a cycle of warming, then at least clean up our oceans, clean up our forests and stop burning them. «

*Amy* : And what about the significance of Greta Thunberg? When did you first hear what she was doing in Sweden?

*Xiye*: So, when I first heard about Greta, I was really inspired by her moral compass, which aligns with my indigenous cosmology and beliefs. I am Otomi Toltec from Mexico. And indigenous beliefs are that you take care of the Earth because the Earth takes care of you. And we need that reciprocity. And I saw that she had a very high level of morality in saying, 'You are affecting our future, so we have to take action now.' And I think that a lot of people look up to her and believe in her because she is really saying, "My generation is going to be the most affected, and that generation is us, and we're calling on you to join us, because we cannot vote yet. But we strike today, and we vote tomorrow. And we need you to speak for us in this time of crisis. «

*Amy* : That was climate youth activist Xiye Bastida, an organizer with Fridays for Future New York, a student at Beacon High School here in New York. She was among the hundreds of supporters who greeted 16-year-old Swedish climate justice activist Greta Thunberg as she arrived on the shores of Lower Manhattan Wednesday afternoon after a two-week voyage across the Atlantic Ocean in an emissions-free yacht.

Greta15 **29Aug2019**

**Greta16 Swedish Youth Climate Justice Activist Greta Thunberg Arrives in NYC After 15-Day Boat Trip**

**29Aug2019**

*Greta*: »I mean, the older generations are the ones who have been causing this problem, and so I don't think they should be saying to us, 'You should just be a normal kid and do what normal kids do,' because they are the ones who have caused this. And we are just trying to clean up after them. «

Greta16 **29Aug2019**

Greta17 Swedish Climate Activist Greta Thunberg Sets Sail for U.N. Conference **15Aug2019**

*Greta:* »I'm not concerned about reactions. What I am concerned about is whether we will do something or not, whether the people in power will react and act with necessary force. «

Greta08 **Greta Thunberg Urges French Lawmakers to Act on Climate Crisis**  
**Lecture in front of the French Parliament in Strasbourg, 23 July 2019** **23Jul2019**

*Greta:* »And I believe that the biggest danger is not our inaction. The real danger is when companies and politicians are making it look like real action is happening when in fact almost nothing is being done apart from clever accounting and creative public relation. «

Greta18 16-Year-Old Climate Activist **24Apr2019**

### **Greta Thunberg meets U.K. Lawmakers**

And in Britain, 16-year-old Swedish climate activist Greta Thunberg called out U.K. lawmakers Tuesday for failing to act in time to avert catastrophic climate change. Thunberg was speaking to a group of MPs from Britain's House of Commons; Prime Minister Theresa May was invited but declined to attend.

*Greta:* »Now we probably don't even have a future anymore, because that future was sold so that a small number of people could make unimaginable amounts of money. And it was stolen from us every time you said that the sky was the limit and that you only live once. «

Greta Thunberg's appearance at the House of Commons came as climate activists with Extinction Rebellion continued a nonviolent civil disobedience campaign. This is Zuhura Plummer, a climate activist who locked herself to a truck at London's Marble Arch landmark, with one hand bound inside a tube labeled "Greta."

*Zuhura Plummer:* "Our tube is called Greta. And this is the very truck that she spoke from yesterday. And I'm doing this because I believe I have literally no other choice. I have worked on climate change for 15 years, and it felt urgent 15 years ago, my first job. And I will sit here until I am arrested, because I don't think we have any other way of making our point. And I see myself in the long line of amazing, amazing people who have gone before us, from the suffragettes to Gandhi to the civil rights movement, and many, many, many other people around the world who are putting their bodies and their minds and their hearts on the line."

London police have arrested over 1,000 people since Extinction Rebellion protests broke out in mid-April.

Greta18 **24Apr2019**

Greta19 **Police Clear Extinction Rebellion Sit-In Protesters as**

**Arrest Total Nears 1,000 in London** **22Apr2019**

In London, police have cleared Parliament Square and the Oxford Circus shopping district of sit-in protesters with the group Extinction Rebellion, as they continued a week of actions demanding

urgent action on climate change. Since mid-April, London police have arrested nearly 1,000 people as protesters stopped trains, blocked roads and superglued themselves to buildings in acts of nonviolent civil disobedience. On Sunday, 16-year-old Swedish climate activist Greta Thunberg joined the protests.

*Greta:* »We are now facing an existential crisis, the climate crisis and ecological crisis, which have never been treated as crisis before. They have been ignored for decades. And for way too long, the politicians and the people in power have gotten away with not doing anything at all to fight the climate crisis and the ecological crisis. But we will make sure that they will not get away with it any longer. «

greta19 22Apr2019

Greta19a

»You did not act in time «

23Apr2019

Greta Thunberg's full speech to MPs at the Houses of Parliament

»My name is Greta Thunberg. I am 16 years old. I come from Sweden. And I speak on behalf of future generations.

I know many of you don't want to listen to us – you say we are just children. But we're only **repeating the message** of the united climate science.

Many of you appear concerned that we are wasting valuable lesson time, but I assure you we will go back to school the moment you start listening to science and give us a future. Is that really too much to ask?

In the year 2030 I will be 26 years old. My little sister Beata will be 23. Just like many of your own children or grandchildren. That is a great age, we have been told. When you have all of your life ahead of you. But I am not so sure it will be that great for us.

I was fortunate to be born in a time and place where everyone told us to dream big; I could become whatever I wanted to. I could live wherever I wanted to. People like me had everything we needed and more. Things our grandparents could not even dream of. We had everything we could ever wish for and yet now we may have nothing.

Now we probably don't even have a future any more.

Because that future was sold so that a small number of people could make unimaginable amounts of money. It was stolen from us every time you said that the sky was the limit, and that you only live once.

You lied to us. You gave us false hope. You told us that the future was something to look forward to. And the saddest thing is that most children are not even aware of the fate that awaits us. We will not understand it until it's too late. And yet we are the lucky ones. Those who will be affected the hardest are already suffering the consequences. But their voices are not heard.

Is my microphone on? Can you hear me?

Around the year 2030, 10 years 252 days and 10 hours away from now, we will be in a position where we set off an irreversible chain reaction beyond human control, that will most likely lead to the end of our civilisation as we know it. That is unless in that time, permanent and unprecedented changes in all aspects of society have taken place, including a reduction of CO2 emissions by at least 50%.



And please note that these calculations are depending on inventions that have not yet been invented at scale, inventions that are supposed to clear the atmosphere of astronomical amounts of carbon dioxide.

Furthermore, these calculations do not include unforeseen tipping points and feedback loops like the extremely powerful methane gas escaping from rapidly thawing arctic permafrost.

Nor do these scientific calculations include already locked-in warming hidden by toxic air pollution. Nor the aspect of equity – or climate justice – clearly stated throughout the Paris agreement, which is absolutely necessary to make it work on a global scale.

We must also bear in mind that these are just calculations. Estimations. That means that these “points of no return” may occur a bit sooner or later than 2030. No one can know for sure. We can, however, be certain that they will occur approximately in these timeframes, because these calculations are not opinions or wild guesses.

These projections are backed up by scientific facts, concluded by all nations through the IPCC. Nearly every single major national scientific body around the world unreservedly supports the work and findings of the IPCC.

Did you hear what I just said? Is my English OK? Is the microphone on? Because I’m beginning to wonder.

During the last six months I have travelled around Europe for hundreds of hours in trains, electric cars and buses, repeating these life-changing words over and over again. But no one seems to be talking about it, and nothing has changed. In fact, the emissions are still rising.

When I have been travelling around to speak in different countries, I am always offered help to write about the specific climate policies in specific countries. But that is not really necessary. Because the basic problem is the same everywhere. And the basic problem is that basically nothing is being done to halt – or even slow – climate and ecological breakdown, despite all the beautiful words and promises.

The UK is, however, very special. Not only for its mind-blowing historical carbon debt, but also for its current, very creative, carbon accounting.

Since 1990 the UK has achieved a 37% reduction of its territorial CO<sub>2</sub> emissions, according to the Global Carbon Project. And that does sound very impressive. But these numbers do not include emissions from aviation, shipping and those associated with imports and exports. If these numbers are included the reduction is around 10% since 1990 – or an average of 0.4% a year, according to Tyndall Manchester.

And the main reason for this reduction is not a consequence of climate policies, but rather a 2001 EU directive on air quality that essentially forced the UK to close down its very old and extremely dirty coal power plants and replace them with less dirty gas power stations. And switching from one disastrous energy source to a slightly less disastrous one will of course result in a lowering of emissions.

But perhaps the most dangerous misconception about the climate crisis is that we have to “lower” our emissions. Because that is far from enough. Our emissions have to stop if we are to stay below 1.5-2C of warming. The “lowering of emissions” is of course necessary but

it is only the beginning of a fast process that must lead to a stop within a couple of decades, or less. And by “stop” I mean net zero – and then quickly on to negative figures. That rules out most of today’s politics.

The fact that we are speaking of “lowering” instead of “stopping” emissions is perhaps the greatest force behind the continuing business as usual. The UK’s active current support of new exploitation of fossil fuels – for example, the UK shale gas fracking industry, the expansion of its North Sea oil and gas fields, the expansion of airports as well as the planning permission for a brand new coal mine – is beyond absurd.

This ongoing irresponsible behaviour will no doubt be remembered in history as one of the greatest failures of humankind.

People always tell me and the other millions of school strikers that we should be proud of ourselves for what we have accomplished. But the only thing that we need to look at is the emission curve. And I’m sorry, but it’s still rising. That curve is the only thing we should look at.

Every time we make a decision we should ask ourselves; how will this decision affect that curve? We should no longer measure our wealth and success in the graph that shows economic growth, but in the curve that shows the emissions of greenhouse gases. We should no longer only ask: “Have we got enough money to go through with this?” but also: “Have we got enough of the carbon budget to spare to go through with this?” That should and must become the centre of our new currency.

Many people say that we don’t have any solutions to the climate crisis. And they are right. Because how could we? How do you “solve” the greatest crisis that humanity has ever faced? How do you “solve” a war? How do you “solve” going to the moon for the first time? How do you “solve” inventing new inventions?

The climate crisis is both the easiest and the hardest issue we have ever faced. The easiest because we know what we must do. We must stop the emissions of greenhouse gases. The hardest because our current economics are still totally dependent on burning fossil fuels, and thereby destroying ecosystems in order to create everlasting economic growth.

“So, exactly how do we solve that?” you ask us – the schoolchildren striking for the climate.

And we say: “No one knows for sure. But we have to stop burning fossil fuels and restore nature and many other things that we may not have quite figured out yet.”

Then you say: “That’s not an answer!”

So we say: “We have to start treating the crisis like a crisis – and act even if we don’t have all the solutions.”

“That’s still not an answer,” you say.

Then we start talking about circular economy and rewilding nature and the need for a just transition. Then you don’t understand what we are talking about.

We say that all those solutions needed are not known to anyone and therefore we must unite behind the science and find them together along the way. But you do not listen to that. Because those answers are for solving a crisis that most of you don’t even fully understand. Or don’t want to understand.

You don't listen to the science because you are only interested in solutions that will enable you to carry on like before. Like now. And those answers don't exist any more. Because you did not act in time.

Avoiding climate breakdown will require cathedral thinking. We must lay the foundation while we may not know exactly how to build the ceiling.

Sometimes we just simply have to find a way. The moment we decide to fulfil something, we can do anything. And I'm sure that the moment we start behaving as if we were in an emergency, we can avoid climate and ecological catastrophe. Humans are very adaptable: we can still fix this. But the opportunity to do so will not last for long. We must start today. We have no more excuses.

We children are not sacrificing our education and our childhood for you to tell us what you consider is politically possible in the society that you have created. We have not taken to the streets for you to take selfies with us, and tell us that you really admire what we do.

We children are doing this to wake the adults up. We children are doing this for you to put your differences aside and start acting as you would in a crisis. We children are doing this because we want our hopes and dreams back.

I hope my microphone was on. I hope you could all hear me.

#### **Greta22 1.4 Million Students Walk Out of Class Demanding Action, NY**

**18Mar2019**

Democracy Now! was in the streets of New York City on Friday with the young activists. We speak with 18-year-old Alysa Chen, one of the organizers of the walkout at New York City's Bronx High School of Science.

*Amy Goodman:* This is *Democracy Now!* I'm Amy Goodman. Up to 1.4 million young people around the world took part in the "Global Climate Strike" Friday to demand world leaders to do more to address the dangers of climate. Strikes were reported in 125 countries. The mass protests were sparked by 16-year-old Swedish climate activist Greta Thunberg, who has skipped school every Friday to sit outside the Swedish parliament to demand leaders act on climate. On Friday, Greta spoke at her rally in Stockholm, Sweden.

*Greta Thunberg:* The last time I checked, there were over 123 countries where there are going to be strikes today, in 2,052 places, cities.

*Amy:* Greta Thunberg was just nominated for a Nobel Peace Prize. Here in New York, students held a climate strike rally outside City Hall.

*Protesters:* What do we want? Change! When do we want it? Now! What do we want? Change! When do we want it? Now!

*Alysa Chen:* I am here from Bronx Science. We walked out of our school. We all received cuts. My friends got zeros on their math test. We've neglected anything from our school to walk out and come here today from the Bronx. This country needs to get its priorities straight. I demand our mayor to support the declaration of climate change as a national emergency!

*Protesters:* Show me what democracy looks like! This is what democracy looks like!

*Diego Delgado:* My name is Diego Delgado. I go to the Bronx Academy for Software Engineering. The reason I came here with my flag of Puerto Rico is because I wanted to show support for the island. I wanted to show support for the rest of the Caribbean, because it's a very low-lying area that needs to have support put onto it, because the oceans are rising very quickly, and these are very susceptible to that, as well as the fact that Hurricane Maria hit Puerto Rico and other islands in 2017. Many still haven't recovered. Three thousand people died in Puerto Rico, including members of my own family. And I think it's an issue that the United States did not focus enough on, and Puerto Rico did not receive enough aid from the United States. So, it just goes to show that climate change is killing people already, and the U.S. has complete inaction on it.

*Zoey:* My name is Zoey, and I go to the Brooklyn Free School. My sign says, "Fracking No!" because fracking is wrong, and there's nothing good about it. And it like causes earthquakes. It pollutes the water around it, so people and animals can die. It's horrible!

*Protesters:* When our planet's under attack, what we do? Stand up, fight back! When our planet's under attack, what we do? Stand up, fight back!

*Tasnim Emu:* My name is Tasnim Emu, and I'm from Urban Assembly Institute of Math and Science for Young Women. They say that education isn't worth sacrificing to make a political point. But I think they're wrong, because we're all here going to school, and we think that we have this big future for us, but our education will be ignored if we're too busy trying to survive instead of living.

*Protesters:* Sea levels are rising! And so are we!

*Amy:* Some of the voices here in New York at this part of the global climate march. For more, we're joined in New York by 18-year-old Alysa Chen, one of the organizers of the walkout at New York's Bronx High School of Science.

Alysa, it's great to have you with us. We saw you out there speaking to the crowd. Why did you organize Bronx Science?

*Alysa:* All right, well, for a long time, I felt like I was the only one in my school who felt very strongly about this and felt like we needed to have a presence in this march. But apparently I was joined by three other very passionate individuals in my school, one of which, named Azalea Danes, had created her own Instagram account and mobilized hundreds of our students to follow it and keep up with this climate strike that we were organizing. And then, for two weeks straight, with like barely any sleep, we worked on a seven-page proposal to our school administration. We worked on the logistics behind this walkout, that we were going to walk out to this park outside of our school and give speeches in the bleachers and be able to mobilize these people and make them feel very, you know, angry at the government for what it has not done to address climate change.

*Amy:* What do you want Mayor de Blasio to do?

*Alysa:* I want Mayor de Blasio to recognize that we have a voice in this, that we have the ability and the passion and the will to really move this forward and solve the climate crisis, because if – you know, politicians today are not addressing this, and those are the ones in office right now. We are the ones who want our voices heard.

*Amy:* President Trump has called immigration a national emergency. What do you respond to him?

*Alysa:* I respond to him that climate change is the real, demanding, existential issue of today. Not to ignore immigration, not to devalue the issue, but I think he is drawing the attention away from the biggest elephant in the room, from what our country, as the second-highest polluter in the world –

*Amy:* Do you think climate change is a national emergency?

*Alysa:* Yes, I thoroughly believe so. And I believe that scientists across the nation and the world also agree with me.

*Amy:* Alysa Chen, I want to thank you for being with us, 18-year-old senior at Bronx High School of Science. I'm Amy Goodman. Thanks so much for joining us. Greta22 18Mar2019

Greta22a

Students Take the Streets for

### International "Youth Climate Strike"

Stockholm, Sweden 18Mar2019

*Greta:* »And we, the young people, have not contributed to this crisis. ... We are not going to accept it. We are not going to let it happen. And that is why we are striking. We strike because we want a future, and we will continue. « greta22a 18Mar2019

Greta24

### 16-Year-Old Activist Greta Thunberg Demands Elites Act on Climate

in Davos, Switzerland

24Jan2019

The 16-year-old Swedish climate activist Greta Thunberg has arrived in Davos, Switzerland, where she's calling on heads of state and global elites gathered for the World Economic Forum to take urgent action on climate change. Ahead of her trip to the forum, Thunberg posted a video online accusing corporate and government leaders of essentially doing nothing to prevent a climate catastrophe. *Greta:* »Some people say that the climate crisis is something that we all have created. But that is just another convenient lie, because if everyone is guilty, then no one is to blame. And someone is to blame. Some people – some companies and some decision-makers in particular – has known exactly what priceless values they are sacrificing to continue making unimaginable amounts of money. I want to challenge those companies and those decision-makers into real and bold climate action, to set their economic goals aside and to safeguard the future living conditions for humankind. I don't believe for one second that you will rise to that challenge. But I want to ask you all the same. I ask you to prove me wrong. «

Greta24 24Jan2019

Greta23:

### Swedish Teen Greta Thunberg Leads Belgian School Strike for Climate

Antwerp, Belgium 01Mar2019

*Greta:* »For way too long, the politicians and the people in power have gotten away with not doing anything to fight the climate crisis. And we will make sure that they will not get away with it anymore. We are striking because we have done our homework and they have not. «

Greta06 Heads of state and global elites gathered for the World Economic Forum in Davos,  
“16-Year-Old Activist Greta Thunberg Demands Elites Act on Climate” 24Jan2019

16-year-old Swedish climate activist Greta Thunberg has arrived in Davos, Switzerland, where she’s calling on heads of state and global elites gathered for the World Economic Forum to take urgent action on climate change. Ahead of her trip to the forum, Thunberg posted a video online accusing corporate and government leaders of essentially doing nothing to prevent a climate catastrophe.

*Greta:* »Some people say that the climate crisis is something that we all have created. But that is just another convenient lie, because if everyone is guilty, then no one is to blame. And someone is to blame. Some people – some companies and some decision-makers in particular – has known exactly what priceless values they are sacrificing to continue making unimaginable amounts of money. I want to challenge those companies and those decision-makers into real and bold climate action, to set their economic goals aside and to safeguard the future living conditions for humankind. I don’t believe for one second that you will rise to that challenge. But I want to ask you all the same. I ask you to prove. « Greta06 24Jan2019

Greta26

### Heeding Call of Greta Thunberg

Polish Students Walk Out of Class

Katowice, Poland 14Dec2018

*Amy Goodman:* The music break is Polish high school students singing Michael Jackson’s “Earth Song” here at the COP24, the U.N. climate talks we’re broadcasting from, here in Katowice, Poland. I’m Amy Goodman.

Fifteen-year-old Swedish climate activist Greta Thunberg has called for a global climate strike today to protest inaction at the U.N. climate summit. Greta made international headlines after she refused to go to school in August and September and began a school strike for climate. Greta made the call for today’s strike in a video posted on Twitter.

*Greta:* Hello. My name is Greta Thunberg. I am 15 years old, and I come from Sweden. And I am here at the United Nations climate change talks in Poland. We are on week two of negotiations here. And as of now, there are no signs of commitments to climate action. Our emissions are still increasing, at the same time as the science has clearly told us that we need to act now to keep the planet within 1.5 degrees of warming.

Whoever you are, wherever you are, we need you now. This Friday, the 14th of December, I am calling for an international climate strike. Please strike with us. Stand outside your parliament or local government office, even for just a short while, to let them know that we demand climate action.

*Amy:* The words of 15-year-old Swedish climate activist Greta Thunberg, who just left the U.N. climate summit last night, her dad driving their electric car through the night so she could sit in front of the Swedish parliament once again, where she goes every Friday in a school strike against climate change.

Here in Katowice, Poland, at least 30 local high school students answered Greta's call, walking out of classes today and carrying their message here to the COP. The group sang and chanted while sitting on the steps of the main conference hall, holding signs that said "12 years left" and 'ClimateStrike'. This is student Gosia Chehowska speaking with Democracy Now!'s Carla Wills.

*Malgorzata Czachowska:* My name is Gosia. And I live next to Katowice, and I go to school in Katowice. And I wasn't there today because I went to climate protest. And I want to support Greta with her idea, and I want to – politicians to make a good choice for all of us.

*Carla Wills:* And so, you said you were inspired by Greta Thunberg, who spoke here at COP. Can you talk about her message and why it resonated with you?

*Malgorzata:* Well, I think that what she did was really brave and amazing, because not many young people have the feeling that they can do something. And I think that one person can do a lot. And she is a great example of this.

*carla:* You were holding up some letters while you were just rehearsing. Talk about what the words are that you were holding up.

*Malgorzata:* We have letters that say "12 years left." And it's because of the Paris Agreement and about scientists that counted that in – if we don't do nothing 'til 2030, we are really in danger, and, well, it may end really badly for all of us, for humanity and for entire world.

*Carla:* And tell me what song you're singing today.

*Malgorzata:* We are singing song "Earth Song" by Michael Jackson. And we are singing it a cappella. And this song is really beautiful, and it's perfect for today's occasion.

*Student Climate Strikers [singing]:*

What about sunrise  
What about rain  
What about all the things that you said  
We were to gain  
What about killing fields  
Is there a time  
What about all the things  
That you said were yours and mine  
Did you ever stop to notice  
All the blood we've shed before  
Did you ever stop to notice  
This crying Earth, these weeping shores

*Carla:* And what is your message to the negotiators here at COP?

*Malgorzata:* They know the facts. And maybe they sometimes don't want to admit it, but they know everything what they need to know. They know the solutions. They know that we need to change, because, otherwise, the world will change in a way we don't want to know. So, my message is to not ignore anymore all the threats and to do something, and not just for money, not just for economics, but for us, for all the people, for the animals and plants and for our world.

*Amy:* Special thanks to John Hamilton, Carla Wills and Hany Massoud. And an update on 15-year-old climate activist Greta Thunberg: She returned to Sweden last night. They were driving an electric car. She was with her father. Said she'd try to get Malmö; she wouldn't make it to Stockholm. She just posted a photo on Twitter of herself participating in the climate strike.

Greta26 14Dec2018

Greta27

» **You Are Stealing Our Future!** «

13Dec2019

Greta Thunberg, 15, Condemns the World's Inaction on Climate Change.

Fifteen-year-old Swedish climate activist Greta Thunberg addressed

**the U.N. plenary last night in Katowice, Poland**

*Amy Goodman:* And we are going to end today with the words of 15-year-old Swedish climate activist Greta Thunberg, who addressed the U.N. plenary session last night.

*Greta:* My name is Greta Thunberg. I am 15 years old, and I'm from Sweden. I speak on behalf of "Climate Justice Now!"

Many people say that Sweden is just a small country, and it doesn't matter what we do. But I've learned that you are never too small to make a difference. And if a few children can get headlines all over the world just by not going to school, then imagine what we could all do together if we really wanted to.

But to do that, we have to speak clearly, no matter how uncomfortable that may be. You only speak of green eternal economic growth because you are too scared of being unpopular. You only talk about moving forward with the same bad ideas that got us into this mess, even when the only sensible thing to do is pull the emergency brake. You are not mature enough to tell it like it is. Even that burden you leave to us children.

But I don't care about being popular. I care about climate justice and the living planet. Our civilization is being sacrificed for the opportunity of a very small number of people to continue making enormous amounts of money. Our biosphere is being sacrificed so that rich people in countries like mine can live in luxury. It is the sufferings of the many which pay for the luxuries of the few.

The year 2078, I will celebrate my 75th birthday. If I have children, maybe they will spend that day with me. Maybe they will ask me about you. Maybe they will ask why you didn't do anything while there still was time to act. You say you love your children above all else, and yet you are stealing their future in front of their very eyes.

Until you start focusing on what needs to be done, rather than what is politically possible, there is no hope. We cannot solve a crisis without treating it as a crisis. We need to keep the fossil fuels in the ground, and we need to focus on equity. And if solutions within the system are so impossible to find, then maybe we should change the system itself.

We have not come here to beg world leaders to care. You have ignored us in the past, and you will ignore us again. We have run out of excuses, and we are running out of time. We have come here to let you know that change is coming, whether you like it or not. The real power belongs to the people. Thank you.



*Amy Goodman:* You have just been listening to 15-year-old Swedish climate activist Greta Thunberg addressing the U.N. plenary last night. She has called for a global school strike on Friday.

That does it for our show. A very special thanks to Democracy Now!'s Mike Burke and John Hamilton and Sam Alcott and Libby Rainey.

Greta27 13Dec2019

Greta28

» **Our Leaders Are Behaving Like Children** «

11Dec2018

Teen Climate Activist Confronts World Leaders at U.N. Summit in Katowice, Poland

*Amy Goodman:* We're broadcasting from the U.N. climate summit in Katowice, Poland, where world leaders are gathered to negotiate climate solutions that could dictate policy for years to come. But we begin today's program with a climate activist who says politicians here are not doing enough to turn back the clock and prevent catastrophic climate change: 15-year-old Greta Thunberg.

She's made international headlines since launching a school strike against climate change in her home country of Sweden earlier this year. She sat on the steps of the parliament in Stockholm every school day for three weeks, leading up to the Swedish election in September, to demand that politicians take more radical action to stop global warming. After the election, she went back to school, but only for four days a week, because every Friday Greta continues to sit outside the parliament building. Her actions have inspired thousands of students across the globe to do the same. Greta has Asperger's syndrome. She has focused with laser intensity on climate change since she was 9 years old. She brought her message directly to world leaders here in Katowice at the U.N. climate summit. Here she is addressing U.N. Secretary-General António Guterres last week.

*Greta Thunberg:* For 25 years, countless of people have stood in front of the United Nations climate conferences asking our nations' leaders to stop the emissions. But clearly this has not worked, since the emissions just continue to rise. So I will not ask them anything. Instead, I will ask the people around the world to realize that our political leaders have failed us, because we are facing an existential threat and there is no time to continue down this road of madness.

Rich countries like Sweden need to start reducing emissions by at least 15 percent every year to stay below a 2-degree warming target. You would think the media and every one of our leaders would be talking about nothing else, but they never even mention it. Nor does hardly anyone ever mention that we are in the midst of the sixth mass extinction, with up to 200 species going extinct every single day. Furthermore does no one ever speak about the aspect of equity, clearly stated in the Paris Agreement, which is absolutely necessary to make it work on a global scale. That means that rich countries like mine need to get down to zero emissions within six to 12 years, with today's emission speed. Because how can we expect countries like India, Colombia or Nigeria to care about the climate crisis if we, who already have everything, don't care even a second about our actual commitments to the Paris Agreement?

So, when school started in August this year, I sat myself down on the ground outside the Swedish parliament. I school-striking for the climate. Some people say that I should be in school instead. Some people say that I should study to become a climate scientist so that I can "solve" the climate crisis. But the climate crisis has already been solved. We already have all the facts and solutions. And why should I be studying for a future that soon may be no more,

when no one is doing anything to save that future? And what is the point of learning facts when the most important facts clearly means nothing to our society?

Today we use 100 million barrels of oil every single day. There are no politics to change that. There are no rules to keep that oil in the ground. So we can no longer save the world by playing by the rules, because the rules have to be changed. So we have not come here to beg the world leaders to care for our future. They have ignored us in the past, and they will ignore us again. We have come here to let them know that change is coming, whether they like it or not. The people will rise to the challenge.

**And since our leaders are behaving like children,**

we will have to take the responsibility they should have taken long ago. Thank you.

*Amy Goodman:* That was Greta Thunberg addressing the United Nations here in Katowice, Poland. Renowned climate activist Kevin Anderson tweeted, “On climate change @GretaThunberg demonstrates more clarity & leadership in one speech than a quarter of a century of the combined contributions of so called world leaders. Wilful ignorance & lies have overseen a 65% rise in CO2 since 1990. Time to hand over the baton,” he tweeted. Greta28 **11Dec2018**

**Greta29**

**Meet 15-Year-Old Activist Greta Thunberg,**

**11Dec2019**

Who Inspired a Global Movement. **Katowice, Poland**

As government ministers from around the globe gather in Katowice, Poland, for the final days of the 24th U.N. climate summit, we speak with 15-year-old activist Greta Thunberg, who denounced politicians here last week for their inaction on reducing greenhouse gas emissions. She has garnered global attention for carrying out a weekly school strike against climate change in her home country of Sweden. “We need to change ourselves now, because tomorrow it might be too late,” says Thunberg. We are also joined by her father, Svante Thunberg, a Swedish actor.

*Amy Goodman:* We’ll have Kevin Anderson on later in the broadcast, but we’re now joined by Greta Thunberg. She has been named one of *Time* magazine’s Most Influential Teens of 2018. Welcome to Democracy Now! Greta. It’s wonderful to have you with us.

*Greta Thunberg:* Thank you for having me here.

*Amy:* So, you sat outside the Swedish parliament in September every day, when all the other kids were in school. What made you decide to go to the Swedish parliament?

*Greta:* Well, it started with a couple of youths in the United States refused to go to school because of the school shootings. And then someone I knew said, “What if children did that for the climate?” And then I thought ...

*Amy:* Oh, you’re talking about the Parkland students, in Parkland, Florida ...

*Greta:* Oh, yeah.

*Amy:* ... after the massacre there Valentine’s Day.

*Greta:* And then, I thought that that was a good idea, that maybe it would make a difference. And then I tried to bring people with me, but no one was really interested, so I had to do it alone. But then –

*Amy:* And so, you just ...

*Greta:* The second day, people started joining me.

*Amy:* Why climate change? Why is that so important to you?

*Greta:* Because what we do now, future generations can't undo in the future. We are deciding right now how we want our future to look like.

*Amy:* And when did you decide climate change was the issue you wanted to devote your life to?

*Greta:* I mean, I have read a lot about it. And one thing that I found very scary is tipping points, that once we reach tipping points, then there's no going back. Then we start a chain reaction beyond our control. And that is very scary. And so that I thought, instead of worrying about how future might turn out, you should try to change it while you still can. So that's what I wanted to do.

*Amy:* So, how have you changed your life, once you started to learn about climate change?

*Greta:* I personally have stopped flying. I have stopped eating meat and dairy. I have –

*Amy:* So let's take these one at a time. You stopped flying. So how did you get here to Poland? You live in Sweden.

*Greta:* Yeah. We went here by electrical car.

*Amy:* How long did it take you to drive here?

*Greta:* Two days, including one night at a hotel.

*Amy:* And why did you stop eating meat?

*Greta:* Both of ethical reasons and by ecological reasons.

*Amy:* And what else have you done?

*Greta:* I have a shop stop. It means that you don't buy things, new things, unless it's absolutely necessary.

*Amy:* Talk about what you're wearing, your sweatshirt today.

*Greta:* Oh, this is a shirt from Hundar Utan Hem, Dogs Without Home, a Swedish organization which gives homeless dogs a home.

*Amy:* Do you have dogs?

*Greta:* Yes, I have two dogs. One is from there.

*Amy:* One is from that shelter?

*Greta:* Yeah.

*Amy:* So, how do you feel being here at the U.N. climate summit? How long have you studied the issue?

*Greta:* We arrived here last Saturday. So, a little bit more than a week now we have been here. And I started reading about the climate crisis when I was maybe 9 years old. In school, my teachers, they told me about it. And I thought that it was very strange that humans, who are an animal species among others, could be capable of changing the Earth's climate, because if that was the case and if it was really happening, we wouldn't be talking about anything else, but that would be our first priority. But no one ever even mentions it. So I started reading about it. And the more I

read about it, the more I understood it. And once you fully understand what it means, you can never go back.

Amy : So, it's interesting you are sitting in front of the Swedish parliament every day for three weeks, considering most people think of Sweden as one of the most progressive when it comes to climate change.

Greta: Yeah. We have a reputation of being very, very green, but Sweden is one of the top 10 countries in the world with the highest ecological footprint per capita. And we have very high emissions per capita. And so, we are not a role model.

amy : The emissions have actually gone up in the last year?

Greta: Yeah. We have just moved them overseas. Our actual emissions in the country may have reduced, but we have just moved our emissions overseas. We let other countries produce the stuff we consume.

Amy : Greta, how do you explain climate change to other kids?

Greta: It depends on how old they are, but that we need to change now, because we are not living within the planetary boundaries, and we are risking future generations' future by continuing like this. We need to change ourselves now, because tomorrow it might be too late.

Amy : What did the Swedish parliamentarians say as they would pass you each day, going up the stairs and down the stairs?

Greta: Most of them ignored me. And then some of them came up to me and said that "You're doing a good job," but very few.

Amy : So, it started – you started getting a lot of attention?

Greta: Yeah.

Amy : Did people bring you food?

Greta: Some. Some people.

Amy : Did that change what you ate?

Greta: No.

Amy : We're going to break for music, and then we're going to come back to this discussion. And we'll not only be speaking with Greta Thunberg, but also with her dad, Svante. This is *Democracy Now!* We'll be back with them in a moment.

Amy : That's the classic tune 'Flight of the Bumblebee' by Nikolai Rimsky-Korsakov, being sung by Swedish opera singer Malena Ernman, the mother of our guest, Greta Thunberg. This is *Democracy Now!*, [democracynow.org](http://democracynow.org), *The War and Peace Report*. I'm Amy Goodman. Greta is staying with us for the hour, 15-year-old climate activist, who came to the U.N. climate summit, where we're broadcasting today, in Katowice, Poland, with her dad Svante, who is an actor in Sweden, her mother an opera singer. They came by electric car over two days, because she refuses to fly. She sat down in front of the Swedish parliament for three weeks in September, not going to school. After the Swedish elections, she went to school four days a week and continued her sit-in every Friday. Greta, thanks for staying with us. Svante Thunberg is also joining us right now. Svante, how has your daughter changed you?

*Svante Thunberg:* Oh, in every possible way, I'd say. It started maybe four years ago. She was very sort of – she got herself in a position where she was learning a lot about the climate change. And she was finding out that everyone was saying one thing and doing the exact other thing. And that, she could not cope with. So, she fell into a depression. She stopped eating, stopped talking. And she fell out of school and stayed at home for almost a year. And my wife and I sort of – we stayed at home with her, of course, and we did everything – I stopped working completely, and we spent, you know, all our time with her.

*Amy:* Now, you're a well-known actor. Your wife is a well-known opera singer. And you both gave up your professions.

*Svante:* Yes. My wife is much more well known than I am. I gave up my career when she was born, actually, because my wife was working overseas. So I basically ...

*Greta:* Housewife.

*Svante:* Yeah, I went to become a housewife instead. So, but I do act sometimes. But ...

*AMY:* And you have two daughters.

*Svante:* Yes, we have two daughters. Beata, as well, yeah.

*Amy:* So, Greta, can you talk about that time - it sounds extremely painful - a few years ago when you stopped talking and stopped eating?

*Greta:* Yes. I became very depressed. I fell into depression. And I – I mean, I didn't – I didn't think that it was – I was so depressed, I didn't see any point of living, because everything was just so wrong. And I kind of saw – because I have Asperger's syndrome, so I work a bit different. I see things black and white. And so, I guess I saw the world from a different perspective. So I saw what was wrong with the world. And I –

*Amy:* What does it mean to have Asperger's syndrome?

*Greta:* That my brain works a bit different. And I usually don't enjoy participating in the social game that the rest of you seem so fond of. And I don't like lying. And I see things black or white.

*Amy:* And you focus with laser intensity on an issue.

*Greta:* Yeah.

*Amy:* Your issue, climate change. And, Svante, what did this mean for you? How have you raised your daughters to deal with the world and in this crisis when Greta stopped eating and was almost hospitalized?

*Svante:* Yeah. She made us realize that we were these parents, you know, standing up for human rights and refugees and right and wrong and all these things. And we were really fighting for that. And then she said, you know, "Whose human rights are you standing up for?" You know, when my wife, for instance, went to Japan to make concerts and being on Japanese TV – you know, very important. You know, it was a good reason to travel across the world to do that. But when she got home, you know, Greta sort of worked out how much – how many tons of carbon dioxide she had spent on that and how many people's carbon budget that was living in West Africa, for instance. So, she basically, you know, confronted us with that. You know, "Whose human rights are you standing up for, when you are draining the world's resources, the functioning atmosphere, for instance?" And so we basically realized, in the end, after a couple of years of her going on

about it, that we had to change. You know, we had to stop doing these things. And that really had an enormous effect. She made her much more happy. And she changed a lot with that. So, yeah.

*Amy:* So, what made you decide to start eating again and start talking, Greta?

*Greta:* I mean, I guess I thought that I could do so much with my life. I can – and what is the point of feeling like this, when I could actually do something good? And so, yeah.

*Amy:* Is your sister older or younger than you?

*Greta:* She's three years younger than me.

*Amy:* And how has she been affected by your choices?

*Greta:* I mean, she has also stopped flying and so on. And she also cares about the climate and the environment. Yeah.

*Amy:* And how has it changed the way you parent, Svante?

*Svante:* Well, it changed – my wife, I mean, she gave up her international opera career. She's working out of Sweden now instead. And that was a big change for us. And obviously it's changed a great many other sort of things. I had to go vegan. First vegetarian, then I had to go vegan. And I do miss the cheese, I have to – I must confess. But it's – no, I mean –

*Amy:* So what did it mean to you to give up meat? And then –

*Svante:* Nothing.

*Amy:* And then cheese and dairy?

*Svante:* Nothing. It meant nothing. I mean, in the end, you know, we're facing a dire catastrophe. But I just didn't realize –

*Amy:* And why is it important? We asked Greta in the first segment why she became vegetarian.

*Svante:* Yeah.

*Amy:* And are you also a vegan, Greta?

*Svante:* Yeah.

*Amy:* So, Svante, what does that mean to you? Why not have a meat-based diet?

*Svante:* Well, because of the climate crisis. I mean, obviously, we are running out of a budget, OK? I mean, the budget is disappearing before our eyes, and we only have a couple of years – less than a couple years to bend the curve, you know, steep, steep down like a roller coaster.

And I think I didn't have a – I didn't have a clue about the climate crisis before, before she got us all interested in this. But once you start walking down that path, there's no going back, and it changes you – I mean, your life is changed in every possible way once you realize, you know, the situation that we're actually in. But I was so amazed that I wasn't aware of it, you know, because I was very aware. I was reading all the papers and stuff. And I just didn't realize where we were at.

*Amy:* What did it mean to you that your parents became vegan? Is your mother also a vegan, Greta?

*Greta:* Yeah, she tries.

*Amy:* You're teaching her. So what did that mean to you, how you changed your parents?

*Greta:* I mean, that meant that they were actually listening to what I was saying. And, I mean, that was good to feel that someone is listening.

*Amy:* You know, Svante, you talked about basically climate equity, about how when you consume a lot, when the Western countries, like Sweden, are engaged in fossil fuel pollution –

*Svante:* Yeah.

*Amy:* ... what that means for the developing world.

*Svante:* Yeah.

*Amy:* Greta, I'd like to ask you that question, this whole issue of climate equity.

*Greta:* Yeah, I mean, since we have higher emissions per capita, we must reduce emissions more. And since we already have all of the infrastructure and everything that we need, we need to reduce our emissions much more, so that the developing countries can have a chance to build some of that infrastructure and so that the people there can have a chance to heighten their standard of living.

*Amy:* Also the effects of climate change –

*Greta:* Yeah, that, of course, yeah.

*Amy:* ... on other countries that can least afford to cope with the change. We're talking with Svante and Greta Thunberg. Can you talk about your relatives? You are both the descendants of Svante Arrhenius, the Nobel Prize-winning scientist, who first calculated the greenhouse effect caused by carbon dioxide emissions in 1896, known to some as the "father of climate change science." Svante, you were named after him?

*Svante:* Yes, I was. My family named me after him, of my father did, because he thought, you know, that was very important. But the fact is, they didn't have a clue why he got the Nobel Prize. You know, he was just a Nobel Prize winner.

*Greta:* They just thought it was nice.

*Svante:* Yeah, it's pretty nice, you know, a nice title. So, he thought – my father was born in 1925. He's pretty old. And his grandmother's cousin, I think, is Svante Arrhenius. So, yeah, it runs in the family. I was – you know, I didn't realize, until I started reading up on the subject, but, yeah, that's our relative, yeah.

*Amy:* And, Greta, you are now, when you're not here at the U.N. climate summit – by the way, I want to point out, we're in this building here in Katowice, the main conference center of this city, that is actually shaped like a coal mine. You know, everywhere around us is black, and you sort of descend down. I don't know if you were aware of that. Also, right by the Poland exhibit, which is called "Black to Green" – did you see this? – are necklaces that have – made out of coal, hearts. There's coal soap. It's soap in the shape of coal. Maybe kind of celebrating coal. Very interesting, when we came to the Warsaw summit – and it's the only country that has hosted the U.N. climate summit three times. It hosted it in Poznan, then in Warsaw, and now we're in Katowice – Katowice, the heart of coal country in Poland. The coal company is clearly very prominent here. Your thoughts on that and what coal means for the world?

*Greta:* I mean, it's just crazy that we are here on the climate change conference, and it's – I think it's sponsored by a coal company. But we need to stop burning coal. As simple as that.

Amy : You are protesting every Friday outside the Swedish parliament now, from every weekday to just Fridays. Why Fridays?

Greta: Why not? Fridays are good days. Friday is a good day to strike.

Amy : You call it a school strike. You've also been following and tweeting about other school strikes around the world.

Greta: Yeah.

Amy : How many have there been?

Greta: Oh, I don't know. Many. Tens of thousands of kids in Australia. Also strikes in Belgium, Canada, the U.S., the U.K., Finland, Denmark, Sweden, France, the Netherlands. I probably forgot something now, but, yeah, it's a lot of places.

Amy : So, Greta, I'd like you to stay with us for the hour. And then we are also going to be joined by the well-known climate scientist Kevin Anderson. We're talking with 15-year-old climate activist Greta Thunberg, here with her father Svante. Svante, thanks so much for joining us and for bringing Greta here.

Svante: THANK you so much.

Amy : GRETA, by the way, who addressed the world here at the U.N. climate summit. This is *Democracy Now!* We'll be back with Greta Thunberg and Kevin Anderson in a moment.

Amy : "My Place on Earth," sung by Malena Ernman, the famous Swedish opera singer, who also happens to be the mother of our guest today, 15-year-old climate activist Greta Thunberg.

Greta29 11Dec2019

Greta30 Climate Scientists:

Katowice, Poland 11Dec2018

»**World's Richest Must Radically Change Lifestyles to Prevent Global Catastrophe.**«

The 24th United Nations climate summit comes amid growing warnings about the catastrophic danger climate change poses to the world. In October, the U.N. Intergovernmental Panel on Climate Change warned that humanity has only a dozen years to mitigate climate change or face global catastrophe – with severe droughts, floods, sea level rise and extreme heat set to cause mass displacement and poverty. But on Saturday, the United States, Saudi Arabia, Russia and Kuwait blocked language “welcoming” the landmark IPCC climate report. New studies show global carbon emissions may have risen as much 3.7 percent in 2018, marking the second annual increase in a row. A recent report likened the rising emissions to a “speeding freight train.” We speak with Kevin Anderson, professor in climate change leadership at Uppsala University's Centre for Environment and Development Studies, and 15-year-old climate activist Greta Thunberg about the drastic action needed to fight climate change and the impact of President Trump on climate change activism.

Amy Goodman: Yes, this is *Democracy Now!*, [democracynow.org](http://democracynow.org), *The War and Peace Report*. I'm Amy Goodman. We're broadcasting from the U.N. climate summit right here in Katowice, Poland. And we're continuing our conversation with Greta, who has been on a school strike calling for climate action. She sits outside the Swedish parliament every Friday. In September, before the



election, she sat for three weeks straight on weekdays. A number of kids also then started to join her.

We're also joined by the renowned climate scientist Kevin Anderson, professor in climate change leadership at the Centre for Environment and Development Studies, Uppsala University, also chair of energy and climate change at the Tyndall Centre for Climate Change Research at the University of Manchester in Britain. Kevin recently tweeted, "On climate change @GretaThunberg demonstrates more clarity & leadership in one speech than a quarter of a century of the combined contributions of so called world leaders. Wilful ignorance & lies have overseen a 65% rise in CO2 since 1990. Time to hand over the baton," he writes.

Well, it's great to have you both with us. Greta, explain again how you made it to Poland, how you got here from Sweden.

*Greta:* Yeah, me and my dad drove here in an electrical car.

*Amy:* Do you use an electric car all over Sweden, or do you use other forms of transportation?

*Greta:* Sometimes that and sometimes train, bus, subway.

*Amy:* I also understand you do a lot of bike riding.

*Greta:* Yeah.

*Amy:* So, Kevin, how did you get here from Britain?

***Kevin Anderson, professor in climate change leadership at Uppsala University's Centre for Environment and Development Studies:***

» I came from Sweden, as well, actually. So, I didn't come by electric car. I came by train and then got the ferry from south of Stockholm to Gdansk and then the train down to Katowice. «

*Amy:* So that's a political decision that you've made, as well.

*Kevin:* It is. But I don't ...

*Amy:* You don't take planes?

*Kevin:* No, but I don't think about it particularly anymore. I don't look at the flights and say, "Well, what are the flights like?" I just look at: How do I get there –

*Amy:* But so ...

*Kevin:* ... without flying?

*Amy:* Why without flying?

*Kevin:* Well, it's probably – emblematically, it's the most important activity that we pursue. The emissions are important. They're 2 to 3 percent of world emissions, about the same as U.K., Germany or California, so a significant amount of emissions. But, actually, when we fly, we are locking in an industry that is very high-carbon, that there are no technical alternatives in the near to medium term to overcome that, so we remain high-carbon. And also, those of us who fly, generally, we also live very wealthy lives. We often use taxis. We live in big homes. We have quite large cars. We drive a lot. We consume a lot of goods. So, almost it's emblematic. It captures the worst excesses in terms of our climate change impacts and also, indeed, border sustainability. And so, I think it's important for people who work on climate change, who think

it's a really major issue, that we demonstrate that we believe in our own research by making some significant changes to how we operate our own lives.

*Amy:* Greta's father Svante is named after a climate scientist. Can you talk about his significance?

*Kevin:* Well, his significance was major, as were a number of people in the 1800s. So, when people talk about climate change as a new phenomenon, I mean, it's not. It's the laws of physics. There's no such thing as climate science. There is science we use to understand the climate. And that science, we've been using for several centuries now. And during the 1800s, there was Fourier; there was John Tyndall, the namesake of the center I'm involved with; and there was Arrhenius in Sweden. And these people were putting together a fairly clear vision of what was causing climate – well, not climate change, what was – understanding global warming and the greenhouse effect and how that might play out in the future. So, we had a good understanding even in the 1800s. So it's not a new phenomenon, as the skeptics often try to suggest.

*Amy:* So, you teach in Sweden, as well as in Britain.

*Kevin:* I do, but in English in Sweden, I hasten to add. I don't teach in Swedish.

*Amy:* So, what did you think when you heard about this kid, this 15-year-old girl, this young woman, named Greta, who sat down in front of the Swedish parliament? When did you first hear this?

*Kevin:* Well, it was, I think, after you had first started doing it, so it was quite some time ago now. And as soon as I heard about it, I just think it's good that something is – well, firstly, bringing climate change to the fore, to the public debate, is important. It's not in the public debate. This COP has been very poorly represented in the media, that I'm aware of, in other parts of Europe. So, bringing climate change to the fore is a really important issue anyway. The second thing is, to bring it to the fore with a degree of clarity and honesty is also really important. And Greta has done that in spades. You know, she's been a real ambassador for understanding climate change, without all of the fluff and nonsense that we put on it.

*Amy:* When you sat down, Greta, in September in front of the parliament, was there discussion in the media – I mean, Sweden considered a very green country – about climate change?

*Greta:* Yes, well, it's understood as. I mean, all of Swedes say, "Oh, we are the best in the world. We have technology, and we have low emissions," and so on.

*Amy:* So, you weren't satisfied, though?

*Greta:* No.

*Amy:* Why?

*Greta:* Because we aren't.

*Amy:* In what way? What are the effects that you feel climate change has in other parts of the world? And what has it meant for you to be here meeting other people and young people from – oh, from especially the developing world and from island nations that might be submerged?

*Greta:* I mean, Swedes are living like if we had 4.2 planet Earths. And, I mean, that means that we steal very much resources from future generations and poorer parts of the world. And, I mean, it's us, the people in the rich countries, and the rich countries that have created these problems.

*Amy:* Kevin, can you talk about the difference between the Trump administration being here – their one side event yesterday was introducing representatives of the fossil fuel industry; they call it realistic

and rational, because they care about jobs, they say – and the previous administration, under President Obama?

*Kevin:* Well, firstly, I mean, I think you have to question whether they care about jobs or whether they care about profits. Certainly there's something that they care about.

But whether – a lot of people I know, people who are concerned about climate change, think of Trump, and they use Trump, to some extent, as an excuse for the inaction of the rest of us. And if you look at what Obama had planned, yeah, Obama's climate plans, OK, were slightly more progressive, or less unprogressive, if such a thing can exist, compared with Trump, but nevertheless Obama was not moving the U.S. towards anything approaching the Paris Agreement. His plans were much more in line with a 3 to 4 degrees centigrade of warming. And people were just saying, "Oh, isn't he doing well?"

So, Trump comes along and basically just stands up in the usual Trumpian way and just says, "I'm not going to be involved in climate change. It's just a – it's a hoax by the Chinese." And that suddenly brings climate change to the fore. People are starting to talk about it again. So, you know, Macron talks about what the French are going to do. The Chinese say they'll step up to the plate to compensate for what America is doing. Other American mayors come to the fore. So, in some respects, Trump has reignited a stagnant debate on climate change. So, whilst I have no time for Trump's views on climate change, or, indeed, on many other issues, I think he has been, to some extent, a catalyst.

And when you align that with Greta's contribution and, increasingly, voices who have – who feel that they've been marginalized over the last 20 years on climate change, they are coming to the fore. I think there is a sense of a new dialogue emerging, not just from climate change, but from the sort of dissatisfaction with how the establishment has dealt with issues over the last 20 or 30 years.

*Amy:* I mean, going back to Copenhagen, going back 10 years ago, you had President Obama flying in and, many felt, weakening the accord.

*Kevin:* Yes, yeah. I mean, the U.S. – well, I mean, it's easy at the moment, when people pick on Russia, the U.S. and Qatar and so forth, saying that they're weakening the – haven't accepted the IPCC 1.5 degrees C report. And, I mean, it's true that they haven't done that. But again, that is something that the rest of us have hidden behind. The other nations are saying, "Isn't that appalling?"

You know, the U.K. said, "Of course we should accept the 1.5 degrees C report," whilst it's just celebrated a new BP oil platform going offshore that's going to produce 120,000 barrels of oil every day. That's 50,000 tons of carbon dioxide every year – every day, rather, and, over the life of the platform, another quarter of a billion tons of CO<sub>2</sub>. That's the U.K. government saying, "We must sign the 1.5 degrees C – we must welcome the 1.5 degrees C report from the IPCC," whilst it's celebrating new oil platforms, it's trying to develop new gas, and it's expanding its airports.

So, we mustn't hide behind Trump or Obama's inadequacy. The rest of us, the rest of the progressive world, are still fighting, as Greta points out, even in Sweden, probably which in many respects is a very progressive country – if you come from the U.K., it feels like that – but even in Sweden they're choosing to do nothing significant on climate change.

*Amy:* Well, let me turn to that side conference, the side program that was held yesterday by the U.S. Shortly before he was interrupted by protesters at a forum on the sidelines of the COP on Monday – COP, it’s called, for “conference of parties,” this U.N. climate summit – President Trump’s adviser on energy, climate, Wells Griffith, praised what he called a U.S. energy “renaissance.”

*Wells Griffith:* Some of the most important factors leading to this renaissance were the dramatic breakthroughs in hydraulic fracturing and horizontal drilling, which has led to increasingly efficient production of natural gas and crude oil. As a result, the United States is now the number one combined oil and gas producer in the world. Technological advances are also driving the growth and reducing cost of renewables, as well. And the same technology revolution is also making U.S. fuels cleaner by nearly all measures.

*Amy:* So, there you have the climate adviser to President Trump. Your response, Kevin?

*Kevin:* Just look at the numbers. This year, carbon dioxide emissions have gone up by 2.7 percent. That came out during the COP, the latest set of data. And when you unpick that, OK, it is easy to blame China and India, the poorer countries trying to industrialize. Their emissions are certainly rising. You look at the U.S., the U.S. emissions have also gone up. And that’s because they’ve been burning far more oil in their cars, which are even larger than they were last year. So, even in the U.S., he can talk about renewables, but really the focus by him, by the adviser, and by the Trump administration is just consuming – producing and consuming ever more fossil fuels. There is no responsibility there for the issues of climate change. It is a complete denial of climate change, which, in a sense, is a denial of physics. It’s a denial of science. So, it’s not to be surprised – we should not be surprised by what he is saying, but we must not use that as an excuse, again, just to beat him and the Trump administration for, when we are making no changes ourselves.

*Amy:* He said we have to be realistic, not alarmist.

*Kevin:* Well, yeah, I agree: We have to be realistic. We have to be realistic. Is it reasonable to live with 3, 4 or 5 degrees centigrade of warming? And I think all analysis – probably even his own if he bothered to undertake any – would say that is not realistic. So, I mean, we’re between a rock and a hard place. We have to make dramatic reductions in our carbon dioxide emissions now to ensure a stable climate for our future and Greta’s futures and Greta’s children’s futures, or we have to just let things carry on with this realistic view about oil and gas today, knowing that we are leaving this legacy for future generations and for all other species which will be completely chaotic.

*Amy:* Let’s talk about who is responsible for the majority of greenhouse gas emissions. An Oxfam study found only 10 percent of the world’s population produces approximately half of all global emissions.

*Kevin:* Yes.

*Amy:* Take it from there.

*Kevin:* Well, firstly, although Oxfam used that data, that originally came from some work by Lucas Chancel and Thomas Piketty, and Piketty is well known for his work as an economist. And that demonstrates that rather than necessarily always focusing on countries, we need to focus on the people who are actually emitting. So the idea that 10 percent of the global population are responsible for 50 percent of global emissions, or 20 percent of the global population are

responsible for 70 percent of all global emissions, tells us that we need to be tailoring our policies towards that small group, rather than trying to squeeze the emissions out of the majority of the world's population, who are hardly emitting anything at all.

So, one of the ways to explain this that I often use, which will hopefully be helpful, is that if that 10 percent of high emitters reduce their carbon footprint, their individual carbon footprint, to the level of the average European citizen, that would be equivalent of a one-third cut in global emissions, even if the other 90 percent did nothing. I mean, a one-third cut in global emissions just from the 10 percent reducing to the level of the average European citizen.

*Amy:* I want to ask Greta about this in one minute, but if you can lay out for us who consumes what in the United States, in the Western countries, in places like Sweden, how much energy they consume versus someone in the developing world?

*Kevin:* Well, if you look at it in relation to their emissions, if you looked at, say, Rwandans, they might be consuming or might be emitting something like 0.1 to 0.5 of a ton.

*Amy:* People in Rwanda.

*Kevin:* Yeah, people in Rwanda, yeah. If you look at the typical American, they're going to be consuming or emitting something like 30 to 35 tons, 30 to 35 tons for the average American, compared with 0.1-ish for the average Rwandan. So you're seeing a massive difference between those two.

*Amy:* And what are people doing, like in the United States, in Europe, and how does people in the United States compare?

*Kevin:* Well, very approximately, America is twice – the U.S. is twice the emissions of the average European. But no –

*Amy:* Because?

*Kevin:* Well, because they have bigger houses, bigger cars. They travel further. They still have a very high-carbon energy system for electricity generation.

*Amy:* You can't find an incandescent light bulb in Europe, that's being sold?

*Kevin:* No. They've been outlawed now or banned, yes, yeah. So, I mean, Europe has made some significant attempts to improve efficiency, but those attempts in efficiency have never compensated for the increase in growth, hence the European Union's overall emissions have remained roughly static, if you take an account of the goods that we import and export.

*Amy:* So, Greta, as we end this show, what message to the world would you like to share? And what are your plans for the future? What grade are you in now in Sweden?

*Greta:* In ninth grade.

*Amy:* In ninth grade.

*Greta:* Yeah.

*Amy:* You can look directly into the camera as you speak.

*Greta:* My message for the world is that we have now a short period of time where we can act. And if we don't take the chance, we might – we're screwed. And so we have to take the chance to act now, because it might be too late, and we don't want to be screwed.

*Amy:* So, that is Greta. And if you're looking her up, that's T-H-U-N-B-E-R-G. Greta is 15 years old, a climate activist from Sweden, got here by electric car. She's just been named by Time magazine as one of the 100 most influential teens in the world. We've also been joined by Kevin, a leading climate scientist, professor in climate change leadership in both Uppsala, Sweden, as well as in Manchester, Britain.

And we're going to end today's show with some breaking news. It's absolutely critical, as we bring you this information, to know that we just interviewed a guest, a guest who is – we're going to turn right now to that information, as we talked about Time magazine. Time magazine has announced it's honoring journalists as its 2018 Person of the Year. The magazine has published its cover for the year, honoring The Washington Post columnist Jamal Khashoggi, who was killed in the Saudi Consulate; and Filipino journalist Maria Ressa, founder of independent news site Rappler – she was just recently charged in the Philippines; Reuters journalists Wa Lone and Kyaw Soe Oo, who are currently imprisoned in Burma for investigating a massacre of Rohingya Muslims; and, finally, the Capital Gazette of Annapolis, Maryland, where earlier this year a gunman opened fire, killing four journalists and one other employee. Time is calling the recipients of this year's tribute: "The Guardians and the War on Truth."

Greta30 Katowice, Poland 11Dec2018

Greta07

TEDxStockholm School strike for climate

24Nov2018

» Save the World by Changing the Rules ! «

**Text here in English, the Original was Swedish.**

**TEDx is an open-source community of independently organized events that inspire like-minded people.**

*Greta:* When I was about eight years old, I first heard about something called climate change or global warming. Apparently, that was something humans have created by our way of living. I was told to turn off the lights to save energy and to recycle paper to save resources.

I remember thinking that it was very strange that humans, who are an animal species among others, could be capable of changing the Earth's climate. Because if we were, and if it was really happening, we wouldn't be talking about anything else.

As soon as you'd turn on the TV, everything would be about that. Headlines, radio, newspapers, you would never read or hear about anything else, as if there was a world war going on. But no one ever talked about it. If burning fossil fuels was so bad that it threatened our very existence, how could we just continue like before? Why were there no restrictions? Why wasn't it made illegal?

To me, that did not add up. It was too unreal. So when I was 11, I became ill. I fell into depression, I stopped talking, and I stopped eating. In two months, I lost about 10 kilos of weight. Later on, I was diagnosed with Asperger syndrome, OCD [obsessive-compulsive disorder] and selective mutism.

That basically means I only speak when I think it's necessary - now is one of those moments. (Applause)

For those of us who are on the spectrum, almost everything is black or white. We aren't very good at lying, and we usually don't enjoy participating in this social game that the rest of you seem so fond of. (Laughter)

I think in many ways that we autistic are the normal ones, and the rest of the people are pretty strange, (Laughter) especially when it comes to the sustainability crisis, where everyone keeps saying climate change is an existential threat and the most important issue of all, and yet they just carry on like before.

I don't understand that, because if the emissions have to stop, then we must stop the emissions. To me that is black or white. There are no gray areas when it comes to survival.

**» Either we go on as a civilization or we don't. «**

We have to change. Rich countries like Sweden need to start reducing emissions by at least 15 percent every year. And that is so that we can stay below a two-degree warming target.

Yet, as the IPCC have recently demonstrated, aiming instead for 1.5 degrees Celsius would significantly reduce the climate impacts. But we can only imagine what that means for reducing emissions.

You would think the media and every one of our leaders would be talking about nothing else, but they never even mention it. Nor does anyone ever mention the greenhouse gases already locked in the system.

Nor [they are speaking about the fact] that air pollution is hiding a warming so that when we stop burning fossil fuels, we already have an extra level of warming perhaps as high as 0.5 to 1.1 degrees Celsius.

Furthermore does hardly anyone speak about the fact that we are in the midst of the sixth mass extinction, with up to 200 species going extinct every single day, that the extinction rate today is between 1,000 and 10,000 times higher than what is seen as normal.

Nor does hardly anyone ever speak about the aspect of equity or climate justice, clearly stated everywhere in the Paris Agreement, which is absolutely necessary to make it work on a global scale.

That means that rich countries need to get down to zero emissions within 6 to 12 years, with today's emission speed. And that is so that people in poorer countries can have a chance to heighten their standard of living by building some of the infrastructure that we have already built, such as roads, schools, hospitals, clean drinking water, electricity, and so on.

Because how can we expect countries like India or Nigeria to care about the climate crisis if we who already have everything don't care even a second about it or our actual commitments to the Paris Agreement?

So, why are we not reducing our emissions? Why are they in fact still increasing? Are we knowingly causing a mass extinction? Are we evil? No, of course not. People keep doing what they do because the vast majority doesn't have a clue about the actual consequences of our everyday life, and they don't know that rapid change is required.

We all think we know, and we all think everybody knows, but we don't.

Because how could we? If there really was a crisis, and if this crisis was caused by our emissions, you would at least see some signs. Not just flooded cities, tens of thousands of dead people, and whole nations leveled to piles of torn down buildings. You would see some restrictions. But no. And no one talks about it.

There are no emergency meetings, no headlines, no breaking news. No one is acting as if we were in a crisis. Even most climate scientists or green politicians keep on flying around the world, eating meat and dairy.

If I live to be 100, I will be alive in the year 2103. When you think about the future today, you don't think beyond the year 2050. By then, I will, in the best case, not even have lived half of my life. What happens next? The year 2078, I will celebrate my 75th birthday. If I have children or grandchildren, maybe they will spend that day with me. Maybe they will ask me about you, the people who were around, back in 2018. Maybe they will ask why you didn't do anything while there still was time to act. What we do or don't do right now will affect my entire life and the lives of my children and grandchildren.

What we do or don't do right now, me and my generation can't undo in the future. So when school started in August of this year, I decided that this was enough. I set myself down on the ground outside the Swedish parliament. I school striked for the climate. Some people say that I should be in school instead. Some people say that I should study to become a climate scientist so that I can "solve the climate crisis.

But the climate crisis has already been solved. We already have all the facts and solutions. All we have to do is to wake up and change. And why should I be studying for a future that soon will be no more when no one is doing anything whatsoever to save that future?

And what is the point of learning facts in the school system when the most important facts given by the finest science of that same school system clearly means nothing to our politicians and our society. Some people say that Sweden is just a small country, and that it doesn't matter what we do, but I think that if a few children can get headlines all over the world just by not coming to school for a few weeks, imagine what we could all do together if you wanted to. (Applause)

Now we're almost at the end of my talk, and this is where people usually start talking about hope, solar panels, wind power, circular economy, and so on, but I'm not going to do that.

We've had 30 years of pep-talking and selling positive ideas. And I'm sorry, but it doesn't work. Because if it would have, the emissions would have gone down by now. They haven't. And yes, we do need hope, of course we do. But the one thing we need more than hope is action. Once we start to act, hope is everywhere. So instead of looking for hope, look for action. Then, and only then, hope will come. Today, we use 100 million barrels of oil every single day. There are no politics to change that. There are no rules to keep that oil in the ground.

**» So we can't save the world by playing by the rules,  
because the rules have to be changed.**

**Everything needs to change, and it has to start today. «**

Thank you. (Applause)

Greta07 24Nov2018



The original content of this program [democracynow.org] is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 United States License. Please attribute legal copies of this work to democracynow.org. Some of the work(s) that this program incorporates, however, may be separately licensed. For further information or additional permissions, contact democracynow.org.

**IPCC Glossary** [https://www.ipcc.ch/site/assets/uploads/2019/06/19R\\_V0\\_02\\_Glossary\\_advance.pdf](https://www.ipcc.ch/site/assets/uploads/2019/06/19R_V0_02_Glossary_advance.pdf)

**Wörterbuch**

Selbstbeschleunigung	autoaceleración	self-acceleration
positive Rückkopplung	retroacoplamiento positivo retroalimentación positiva	positive feedback (feed-back) positive feedback loop, positive feedback effect, positive retro coupling runaway effect
Selbstverstärkung	auto-reforzamiento auto-refuerzo	self-enhancement, self-reinforcement, self-energizing
Selbstanregung	autoestimulación (?) autoexcitación (?)	auto-stimulation
Circulus vitiosus	círculo virtuoso	vicious circle
Strahlungsantrieb	fuerzas motrizes	Radiative forcing forcings drivers

**Literatur**

LiLi.de H91007

**IPCC06** „Special Report on the Ocean and Cryosphere in a Changing Climate” (“SROCC”) = Übersicht, <https://www.ipcc.ch/srocc/home/> **25Sep2019**

**IPCC06a** „Die Erde versinkt in Wasser und Salz“ Zeit online **25Sep2019**  
[www.zeit.de/wissen/umwelt/2019-09/sonderbericht-klimawandel-ipcc-report-ergebnisse-weltklimarat-klimaschutz](http://www.zeit.de/wissen/umwelt/2019-09/sonderbericht-klimawandel-ipcc-report-ergebnisse-weltklimarat-klimaschutz)

**IPCC06b** IPCC Press Release (on IPCC06), [SROCC\\_PressRealise\\_EN.pdf](#) **25Sep2019**  
[https://www.ipcc.ch/site/assets/uploads/sites/3/2019/09/SROCC\\_PressRelease\\_EN.pdf](https://www.ipcc.ch/site/assets/uploads/sites/3/2019/09/SROCC_PressRelease_EN.pdf)

**IPCC06c** IPCC Summary for Policymakers \_ **Headline Statements** **25Sep2019**  
[https://www.ipcc.ch/site/assets/uploads/sites/3/2019/09/SROCC\\_SPM\\_HeadlineStatements.pdf](https://www.ipcc.ch/site/assets/uploads/sites/3/2019/09/SROCC_SPM_HeadlineStatements.pdf)  
[SROCC\\_SPM\\_HeadlineStatements.pdf](#)

**IPCC06d** IPCC Fact Sheet [SROCC-factsheet.pdf](#) **25Sep2019**  
<https://www.ipcc.ch/site/assets/uploads/2019/09/SROCC-factsheet.pdf>

**IPCC06e** „Klimabericht des IPCC: Meeresspiegel steigt immer schneller an.“ Focus online  
[https://www.focus.de/wissen/klima/verheerendes-zeugnis-fuer-die-politik-klimabericht-des-ipcc-meeresspiegel-steigt-immer-schneller-an\\_id\\_11181589.html](https://www.focus.de/wissen/klima/verheerendes-zeugnis-fuer-die-politik-klimabericht-des-ipcc-meeresspiegel-steigt-immer-schneller-an_id_11181589.html) **25Sep2019**

**IPCC05** “Land is a Critical Resource” Press Release **08Aug2019**  
[https://www.ipcc.ch/2019/08/08/land-is-a-critical-resource\\_srcl/](https://www.ipcc.ch/2019/08/08/land-is-a-critical-resource_srcl/)  
[https://www.ipcc.ch/site/assets/uploads/2019/08/Pr\\_SRCCL.pdf](https://www.ipcc.ch/site/assets/uploads/2019/08/Pr_SRCCL.pdf)

**IPCC05a** “Eat less meat!” UN climate change report calls for change to human diet”  
<https://www.nature.com/articles/d41586-019-02409-7> **09Aug2019**

**IPCC05b** „Die Klimazonen verschieben sich“ Laut neuem Bericht des IPCC im August 2019  
<https://www.tagesschau.de/ausland/klimawandel-regional-103.html> **25Jul2019**

**IPCC04** “2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories”  
**May2019**  
[www.ipcc.ch/report/2019-refinement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/](http://www.ipcc.ch/report/2019-refinement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/)

**IPCC04a** “2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse GAS Inventories” **Overview** **19R\_VO\_01\_Overview\_advance.pdf**  
[https://www.ipcc.ch/site/assets/uploads/2019/06/19R\\_VO\\_01\\_Overview\\_advance.pdf](https://www.ipcc.ch/site/assets/uploads/2019/06/19R_VO_01_Overview_advance.pdf) **May2019**

**IPCC04b** “2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories”, **Glossary**, **19R\_VO\_02\_Glossary\_advance.pdf**  
[https://www.ipcc.ch/site/assets/uploads/2019/06/19R\\_VO\\_02\\_Glossary\\_advance.pdf](https://www.ipcc.ch/site/assets/uploads/2019/06/19R_VO_02_Glossary_advance.pdf) **May2019**

**IPCC03** **IPCC: “SPECIAL REPORT Global Warming of 1.5 °C” >** **08Aug2018**  
“Summary for Policymakers” [https://www.ipcc.ch/sr15/ SR15\\_SPM\\_version\\_report\\_LR.pdf](https://www.ipcc.ch/sr15/SR15_SPM_version_report_LR.pdf)  
<https://www.ipcc.ch/report/summary-for-policymakers/>, <https://www.ipcc.ch/sr15/chapter/spm/>  
This report by the world’s leading climate scientists is an ear-splitting wake-up call to the world. It confirms that  
**Climate change is running faster than we are – and we are running out of time.**

**IPCC03a** “Statement by the Secretary-General of the UN, António Guterres, on the IPCC Special Report Global Warming of 1.5 °C”  
<https://www.un.org/sg/en/content/sg/statement/2018-10-08/statement-secretary-general-ipcc-special-report-global-warming-15-%C2%BAc> **08Sept2018**

**IPCC03b** **IPCC 1,5 °C Bericht von 2018 Zusammenfassung** **08Aug2018**  
[https://www.de-ipcc.de/media/content/SR1.5-SPM\\_de\\_barrierefrei.pdf](https://www.de-ipcc.de/media/content/SR1.5-SPM_de_barrierefrei.pdf)

**IPCC03c** **IPCC 1,5 °C Bericht von 2018 Hauptaussagen** **08Aug2018**  
[https://www.de-ipcc.de/media/content/Hauptaussagen\\_IPCC\\_SR15.pdf](https://www.de-ipcc.de/media/content/Hauptaussagen_IPCC_SR15.pdf)

**IPCC03d** **IPCC 1,5 °C Bericht von 2018 Abbildungen** <https://www.de-ipcc.de/281.php>

**IPCC02** Climate Change 2013 **Summary for Policymakers.** The Physical Science Basis.  
[https://www.ipcc.ch/site/assets/uploads/2018/03/WG1AR5\\_SummaryVolume\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/WG1AR5_SummaryVolume_FINAL.pdf) **2014**  
[https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5\\_SPM\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_SPM_FINAL.pdf) ,  
[WG1AR5\\_SummaryVolume\\_Final.pdf](#), [WG1AR5\\_SPM\\_FINAL.pdf](#)

**IPCC02a** **5. Sachstandsbericht: Klimaänderung 2013/2014, Naturwissenschaftliche Grundlagen, Zusammenfassung für politische Entscheidungsträger** **2014**  
<https://www.ipcc.ch/site/assets/uploads/2018/03/ar5-wg1-spmgerman.pdf> [ar5\\_wg1\\_spmgerman.pdf](#)

**IPCC** **About the IPCC:** The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change. <https://www.ipcc.ch/about/>

**IPCC** **IPCC, the Intergovernmental Panel on Climate Change,** provides regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation. The IPCC is an organization of governments that are members of the United Nations or WMO = World Meteorological Organization. The IPCC currently has **195** members. <https://www.ipcc.ch/>

**IPCC** **Glossary** [https://www.ipcc.ch/site/assets/uploads/2019/06/19R\\_V0\\_02\\_Glossary\\_advance.pdf](https://www.ipcc.ch/site/assets/uploads/2019/06/19R_V0_02_Glossary_advance.pdf)

**UNEP** **“A graphic look at the changing Arctic”** **27Mar2019**  
[http://wedocs.unep.org/bitstream/handle/20.500.11822/27687/Arctic\\_Graphics.pdf?sequence=1&isAllowed=y](http://wedocs.unep.org/bitstream/handle/20.500.11822/27687/Arctic_Graphics.pdf?sequence=1&isAllowed=y)  
**UNEP = United Nations Environment Programme**

**ESPAS** **ESPAS Report 2019 “Global Trends to 2030: Challenges and Choices for Europe. 2019**  
European Strategy and Policy Analysis System” <https://espas.secure.europarl.europa.eu/orbis/node/1362>

**vvv045d** **Bolivien – „Der Urwald ist verloren“** **03Sep2019**  
<https://www.zeit.de/wirtschaft/2019-09/bolivien-amazonas-waldbraende-evo-morales>

**vvv045c** **„Nicht nur für Brasilien wird es das Ende sein“**  
Interview von Andreas Weiser mit Prof. Antonio Donato Nobre  
<https://www.tagesspiegel.de/politik/amazonas-experte-warnt-nicht-nur-fuer-brasilien-wird-es-das-ende-sein/24955946.html> **29Aug2019**

**vvv045b** **„Ein Tropenwald ist normalerweise nicht brennbar“** **27Aug2019**  
[https://www.t-online.de/nachrichten/ausland/internationale-politik/id\\_86336754/amazonas-in-flammen-ein-tropenwald-ist-normalerweise-nicht-brennbar-.html](https://www.t-online.de/nachrichten/ausland/internationale-politik/id_86336754/amazonas-in-flammen-ein-tropenwald-ist-normalerweise-nicht-brennbar-.html)

**vvv045a** **„Die Erde brennt, nicht nur in Brasilien“** **26Aug2019**  
<https://www.welt.de/wissenschaft/article199151773/Amazonas-Brasiliens-Regenwald-brennt-Nasa-zeigt-weiteres-Inferno.html>

**vvv045** **Gabor Steingart: „In der Flammenhölle des Amazonas brennt gerade der Glaube an eine bessere Welt ab“** [https://www.focus.de/politik/experten/grosse-ambition-kein-plan-amazonas-waldbraende-zeigen-beim-klimaschutz-ist-g7-in-ohnmacht-vereint\\_id\\_11060629.html](https://www.focus.de/politik/experten/grosse-ambition-kein-plan-amazonas-waldbraende-zeigen-beim-klimaschutz-ist-g7-in-ohnmacht-vereint_id_11060629.html) **23Aug2019**

- vvv044 **Treibhausgas – Wikipedia** <https://de.wikipedia.org/wiki/Treibhausgas>
- vvv043a **“17 Staaten droht Verwüstung”** »Fast zwei Milliarden Menschen droht inzwischen das Wasser auszugehen. « <https://www.faz.net/aktuell/wissen/wasserknappheit-und-trockenheit-17-staaten-droht-verwuestung-16320363.html> **06Aug2019**
- vvv043 **“Weltweit sind 17 Staaten, darunter Indien, von "extrem hohem Wasserstress" betroffen.** <https://www.sueddeutsche.de/wissen/wasserstress-atlas-wasserknappheit-1.4555268> **06Aug2019**
- vvv042 **“Permafrost collapse is accelerating carbon release”**  
<https://www.nature.com/articles/d41586-019-01313-4> **30Apr2019**
- vvv041 **“The Poisons Released by Melting Arctic Ice”** **BBC** **17Jun2019**  
<http://www.bbc.com/future/story/20190612-the-poisons-released-by-melting-arctic-ice>
- vvv040a **EU warnt vor dem Aussterben der Menschheit** **10Apr2019**  
<https://utopia.de/eu-studie-warnt-aussterben-menschheit-134586/> **EPAS** **2019**
- vvv038 **11 Mythen zum Klimawandel** **25 Jul 2018**  
<https://utopia.de/ratgeber/klimawandel-ursachen-folgen-mythen-luegen/>
- vvv037 **“Preparing for *Internal* Climate Migration”** Groundswell Infographic, The World Bank,  
<https://www.worldbank.org/en/news/infographic/2018/03/19/groundswell---preparing-for-internal-climate-migration> **19Mar2018**
- vvv036 **„Verdammt, die Welt geht wirklich unter“,** Essay von Raphael Thelen **21.07.2019**  
[https://www.t-online.de/nachrichten/ausland/krisen/id\\_86126254/klimawandel-verdammt-die-welt-geht-wirklich-unter-und-zwar-bald.html](https://www.t-online.de/nachrichten/ausland/krisen/id_86126254/klimawandel-verdammt-die-welt-geht-wirklich-unter-und-zwar-bald.html)
- vvv035 **Nachhaltigkeit für alle: Wie beeinflussen die Treibhausgase die globale Erwärmung?**  
[Sostenibilidad para todos: ¿Cómo influyen los gases de Efecto Invernadero en el calentamiento global?]  
<https://www.sostenibilidad.com/cambio-climatico/gases-efecto-invernadero-influyen-calentamiento-global/>
- vvv034b **“The great climate conundrum”** <https://www.nature.com/articles/s41561-019-0428-1> **24Jul2019**
- vvv034a **“No evidence for globally coherent warm and cold periods over the preindustrial Common Era”** <https://www.nature.com/articles/s41586-019-1401-2> **24Jul2019**
- vvv034 **“Es ist ein Jahrtausend-Klimawandel für den Planeten“** **24Jul2019**  
<https://www.zeit.de/wissen/umwelt/2019-07/erderwaermung-klimawandel-temperaturschwankungen-auswirkungen-weltweit>
- vvv033 **“Climate Change Drives Widespread and Rapid Thermokarst Development in Very Cold Permafrost in the Canadian High Arctic”** **10June2019**  
Climate Change Drives Widespread and Rapid Thermokarst Development in Very Cold Permafrost in the Canadian High Arctic; <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2019GL082187>
- vvv032 **“Scientists shocked by Arctic permafrost thawing 70 years sooner than predicted”**  
<https://www.theguardian.com/environment/2019/jun/18/arctic-permafrost-canada-science-climate-crisis>  
**18Jun2019**, referring to (vvv033) **10Jun2019**

- vvv031a „Politik zwischen Ignoranz und ökologischen Amoklauf“ (vvv031) **03Jul2019**
- vvv031 „Weltklima auf der Kippe“, TOMASZ KONICZ,  
<https://www.heise.de/tp/features/Weltklima-auf-der-Kippe-4456028.html>, **03Jul2019**
- vvv030 „Kann ein Green New Deal den Klimawandel aufhalten?“ TOMASZ KONICZ,  
[https://www.akweb.de/ak\\_s/ak649/14.htm](https://www.akweb.de/ak_s/ak649/14.htm), **21May2019**
- vvv029 “Eight urgent fundamental and simultaneous steps needed to restore ocean health, and the consequences for humanity and the planet of inaction or delay” IPSO-Report 2019 [http://www.stateoftheocean.org/wp-content/uploads/2019/07/IPSO-2019-Report-Final\\_web-PDF.pdf](http://www.stateoftheocean.org/wp-content/uploads/2019/07/IPSO-2019-Report-Final_web-PDF.pdf)
- vvv028 „Kipppunkte im Klimasystem“, DIETER KASANG im Wiki.Bildungsserver:  
[https://wiki.bildungsserver.de/klimawandel/index.php/Kipppunkte\\_im\\_Klimasystem](https://wiki.bildungsserver.de/klimawandel/index.php/Kipppunkte_im_Klimasystem), **02Dez2015**
- vvv026 “The impacts of climate change at 1.5C, 2C and beyond” **04Oct2018**  
[https://interactive.carbonbrief.org/impacts-climate-change-one-point-five-degrees-two-degrees/?utm\\_source=web&utm\\_campaign=Redirect](https://interactive.carbonbrief.org/impacts-climate-change-one-point-five-degrees-two-degrees/?utm_source=web&utm_campaign=Redirect)
- vvv025 **Tauwetter in der Arktis – eine tickende Zeitbombe** **02Aug2019**  
<https://polarjournal.ch/2019/08/02/tauwetter-in-der-arktis-eine-tickende-zeitbombe/>
- vvv024 **BBC: “Climate change: 12 years to save the planet? Make that 18 months”**  
<https://www.bbc.com/news/science-environment-48964736> **BBC, 24Jul2019**
- vvv023a **Wikipedia: Eis-Albedo-Rückkopplung**  
<https://de.wikipedia.org/wiki/Eis-Albedo-Rückkopplung>
- vvv023 **Wikipedia: Albedo** <https://de.wikipedia.org/wiki/Albedo>
- vvv022a **“Deutsche Wälder stehen kurz vor dem Kollaps”** **19Jul2019** [https://www.t-online.de/leben/familie/id\\_86118928/klimakrise-deutschlands-waelder-stehen-kurz-vor-dem-kollaps-.html](https://www.t-online.de/leben/familie/id_86118928/klimakrise-deutschlands-waelder-stehen-kurz-vor-dem-kollaps-.html)
- vvv022 „Der deutsche Wald steht wegen des Klimawandels vor dem Kollaps“  
<https://web.de/magazine/politik/deutsche-wald-klimawandels-kollaps-33896222> **01Aug2019**
- vvv021 “Climate Change Drives Widespread and Rapid Thermokarst Development in Very Cold Permafrost in the Canadian High Arctic” **18Jun2019**  
<https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2019GL082187>
- vvv020 **Permafrost N2O emissions observed on landscape scales** **06Jun2019**  
<https://www.atmos-chem-phys.net/19/4257/2019/>
- vvv018 **“Indicator: Carbon emissions and removals”** **24Feb2019**  
<https://www.nrcan.gc.ca/our-natural-resources/forests-and-forestry/state-canadas-forests-report/how-does-disturbance-shape-canadas-forests/indicator-carbon-emissions-removals/16552>
- vvv017 **“A consensus estimate for the ice thickness distribution of all glaciers on Earth”**  
<https://www.nature.com/articles/s41561-019-0300-3> Nature **11Feb2019**

vvv015 “Accelerating changes in ice mass within Greenland, and the ice sheet’s sensitivity to atmospheric forcing” [www.pnas.org/cgi/doi/10.1073/pnas.1806562116](http://www.pnas.org/cgi/doi/10.1073/pnas.1806562116) 05Feb2019

vvv014 “How fast are the oceans warming?” Observational records of ocean heat content show that ocean warming is accelerating Science 363 (6423), 128-129, 10 Jan 2019  
DOI: 10.1126/science.aav7619, [63252\\_63058128.full.pdf](https://doi.org/10.1126/science.aav7619)

vvv013 “Global warming will happen faster than we think” Nature, 05Dec2018  
<https://www.nature.com/articles/d41586-018-07586-5>

vvv012 “Fourth National Climate Assessment”, Vol. II, 26Nov2018  
[https://nca2018.globalchange.gov/downloads/NCA4\\_2018\\_FullReport.pdf](https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf)

vvv011 Hausfather: Monthly Global Ocean Heat Content, updated through June 2018: “Global ocean heat content is still increasing rapidly, particularly after the early 1990s”  
<https://twitter.com/hausfath/status/1063165916823748608/photo/1> Graphik im Download 15Nov2018

vvv010 “Quantification of ocean heat uptake from changes in atmospheric O<sub>2</sub> and CO<sub>2</sub> composition” <https://www.nature.com/articles/s41586-018-0651-8>

vvv008 Die Wirklichkeit ist viel schlimmer als die Warnungen, Jonas Schaible, 22Jun2019  
[https://www.t-online.de/nachrichten/ausland/krisen/id\\_85506012/klimawandel-studien-zeigen-die-folgen-sind-schlimmer-als-gedacht.html](https://www.t-online.de/nachrichten/ausland/krisen/id_85506012/klimawandel-studien-zeigen-die-folgen-sind-schlimmer-als-gedacht.html)

*Zitiert zahlreiche Belege dafür, dass der Klimawandel sich beschleunigt gegenüber dem bisher Vorhergesagten, und zwar die Artikel IPCC03, IPCC011, UNEP, vvv010, vvv011, vvv012, vvv013, vvv014, vvv015, vvv017, vvv018, vvv020, vvv021.*

vvv007 “A record melt event in mid-June 2019” Greenland Ice Sheet today, 20Jun2019  
<https://nsidc.org/greenland-today/>

vvv006 “Beware the Ides of July” Arctic Sea Ice News & Articles, 16Jul2019  
<http://nsidc.org/arcticseaicenews/2019/07/beware-the-ides-of-july/>

vvv005 Klimakrise: Untätigkeit und Repression Wolfgang Pomrehn 26Jul2019  
<https://www.heise.de/tp/news/Klimakrise-Untaetigkeit-und-Repression-4480146.html>  
*hier werden die Artikel vvv006 und vvv007 zitiert.*

vvv004 “Adaptive responses of animals to climate change are most likely insufficient”  
<https://www.nature.com/articles/s41467-019-10924-4>, 23Jul2019

vvv003b “No evidence for globally coherent warm and cold periods over the preindustrial Common Era” <https://www.nature.com/articles/s41586-019-1401-2> 24Jul2019

vvv003a “Die globale Erwärmung ist beispiellos” Studie von Schweizer Forschern  
<https://www.tagesschau.de/ausland/klimawandel-regional-101.html> 24Jul2019

vvv002 “Consistent multidecadal variability in global temperature reconstructions and simulations over the Common Era” <https://www.nature.com/articles/s41561-019-0400-0> 24Jul2019

**vvv001** „Klima-Hysterie?“ Franz Alt **27Juli2019**  
<https://www.heise.de/tp/features/Klima-Hysterie-4480583.html>

**uuu012** El Metano del Ártico, una bomba de relojería **03Aug2019**  
<https://carabanchel.net/metano-del-artico-bomba-de-relojeria/>

**Greta's Worte / Some words of Greta's**

**greta32'** **Greta Thunberg's Speech At The U.N. Climate Action Summit NYC** **23Sep2019**  
[www.npr.org/2019/09/23/763452863/transcript-greta-thunbergs-speech-at-the-u-n-climate-action-summit](http://www.npr.org/2019/09/23/763452863/transcript-greta-thunbergs-speech-at-the-u-n-climate-action-summit)

**Greta32** **Greta Thunberg: Emotionale Rede beim UN-Klimagipfel im Wortlaut** **23Sep2019**  
<https://www.merkur.de/politik/greta-thunberg-emotionale-rede-beim-un-klimagipfel-im-wortlaut-und-mit-video-zr-13031691.html>  
Vollständige Text der Rede auf Englisch unter **greta32'**

**Greta31'** **Greta Thunberg Addresses Hundreds of Thousands at NYC Climate Strike** **20Sep2019**  
[https://www.democracynow.org/2019/9/23/new\\_york\\_city\\_climate\\_strike\\_greta](https://www.democracynow.org/2019/9/23/new_york_city_climate_strike_greta),

**Greta30** Climate Scientists: »World's Richest Must Radically Change Lifestyles to Prevent Global Catastrophe.« **Katowice** **11Dec2018**  
[https://www.democracynow.org/2018/12/11/scientist\\_kevin\\_anderson\\_worlds\\_biggest\\_emitters](https://www.democracynow.org/2018/12/11/scientist_kevin_anderson_worlds_biggest_emitters)

**Greta29** **School Strike for Climate: Meet 15-Year-Old Activist Greta Thunberg, Who Inspired a Global Movement** **Katowice, Poland** **11Dec2019**  
[https://www.democracynow.org/2018/12/11/meet\\_the\\_15\\_year\\_old\\_swedish](https://www.democracynow.org/2018/12/11/meet_the_15_year_old_swedish)

**Greta28** **“Our Leaders Are Behaving Like Children”: Teen Climate Activist Confronts World Leaders at U.N. Summit in Katowice, Poland** **11Dec2018**  
[https://www.democracynow.org/2018/12/11/our\\_leaders\\_are\\_behaving\\_like\\_children](https://www.democracynow.org/2018/12/11/our_leaders_are_behaving_like_children)

**Greta27** **You Are Stealing Our Future: Greta Thunberg, 15, Condemns the World's Inaction on Climate Change** [https://www.democracynow.org/2018/12/13/you\\_are\\_stealing\\_our\\_future\\_greta](https://www.democracynow.org/2018/12/13/you_are_stealing_our_future_greta) **13Dec2019**

**Greta26** **Heeding Call of Greta Thunberg, Polish Students Walk Out of Class** **14Dec2018**  
[https://www.democracynow.org/2018/12/14/climate\\_strike\\_heeding\\_call\\_of\\_greta](https://www.democracynow.org/2018/12/14/climate_strike_heeding_call_of_greta)

**greta25** **En la cumbre de la ONU sobre cambio climático, Katowice, Polonia:**  
**» La juventud es la que indica el camino «**  
[https://www.democracynow.org/es/2018/12/14/en\\_la\\_cumbre\\_de\\_la\\_onu](https://www.democracynow.org/es/2018/12/14/en_la_cumbre_de_la_onu) **Greta25** **14Dec2018**  
**Es fehlt noch die Übersetzung ins Deutsche H90930**

**Greta24** **16-Year-Old Activist Greta Thunberg Demands Elites Act on Climate** **24Jan2019**  
[https://www.democracynow.org/2019/1/24/headlines/16\\_year\\_old\\_activist\\_greta\\_thunberg\\_demands\\_elites\\_act\\_on\\_climate](https://www.democracynow.org/2019/1/24/headlines/16_year_old_activist_greta_thunberg_demands_elites_act_on_climate)

**Greta23** **Swedish Teen Greta Thunberg Leads Belgian School Strike for Climate** **01Mar2019**  
[https://www.democracynow.org/2019/3/1/headlines/swedish\\_teen\\_greta\\_thunberg\\_leads\\_belgian\\_school\\_strike\\_for\\_climate](https://www.democracynow.org/2019/3/1/headlines/swedish_teen_greta_thunberg_leads_belgian_school_strike_for_climate)

- Greta22a** Students Take to Streets for International “Youth Climate Strike”  
[https://www.democracynow.org/2019/3/18/headlines/students\\_take\\_to\\_streets\\_for\\_international\\_youth\\_climate\\_strike](https://www.democracynow.org/2019/3/18/headlines/students_take_to_streets_for_international_youth_climate_strike) **18Mar2019**
- Greta22** A Global Strike for Climate Change: 1.4 Million Students Walk Out of Class Demanding Action  
[https://www.democracynow.org/2019/3/18/a\\_global\\_strike\\_for\\_climate\\_change](https://www.democracynow.org/2019/3/18/a_global_strike_for_climate_change) **18Mar2019**
- Greta21** Climate Activist Greta Thunberg Addresses EU Leaders, to Meet with Pope  
[https://www.democracynow.org/2019/4/16/headlines/climate\\_activist\\_greta\\_thunberg\\_addresses\\_eu\\_leaders\\_to\\_meet\\_with\\_pope](https://www.democracynow.org/2019/4/16/headlines/climate_activist_greta_thunberg_addresses_eu_leaders_to_meet_with_pope) **16Apr2019**
- Greta20** 16-Year-Old Climate Activist Greta Thunberg Greeted by Pope Francis  
[https://www.democracynow.org/2019/4/18/headlines/16\\_year\\_old\\_climate\\_activist\\_greta\\_thunberg\\_greeted\\_by\\_pope\\_francis](https://www.democracynow.org/2019/4/18/headlines/16_year_old_climate_activist_greta_thunberg_greeted_by_pope_francis) **18Apr2019**
- Greta19a** **»You did not act in time«** **23Apr2019**  
Greta Thunberg's full speech to MPs at the Houses of Parliament  
<https://www.theguardian.com/environment/2019/apr/23/greta-thunberg-full-speech-to-mps-you-did-not-act-in-time>
- Greta19** Police Clear Extinction Rebellion Sit-In Protesters as Arrest Total Nears 1,000, **London**  
[https://www.democracynow.org/2019/4/22/headlines/police\\_clear\\_extinction\\_rebellion\\_sit\\_in\\_protesters\\_as\\_arrest\\_total\\_nears\\_1\\_000](https://www.democracynow.org/2019/4/22/headlines/police_clear_extinction_rebellion_sit_in_protesters_as_arrest_total_nears_1_000) **22Apr2019**
- Greta18** 16-Year-Old Climate Activist Greta Thunberg Meets U.K. Lawmakers  
[https://www.democracynow.org/2019/4/24/headlines/16\\_year\\_old\\_climate\\_activist\\_greta\\_thunberg\\_meets\\_uk\\_lawmakers](https://www.democracynow.org/2019/4/24/headlines/16_year_old_climate_activist_greta_thunberg_meets_uk_lawmakers) **24Apr2019**
- Greta17** Swedish Climate Activist Greta Thunberg Sets Sail for U.N. Conference  
[https://www.democracynow.org/2019/8/15/headlines/swedish\\_climate\\_activist\\_greta\\_thunberg\\_sets\\_sail\\_for\\_un\\_conference](https://www.democracynow.org/2019/8/15/headlines/swedish_climate_activist_greta_thunberg_sets_sail_for_un_conference) **15Aug2019**
- Greta16** Swedish Youth Climate Justice Activist Greta Thunberg Arrives in NYC After 15-Day Boat Trip  
[https://www.democracynow.org/2019/8/29/headlines/swedish\\_youth\\_climate\\_justice\\_activist\\_greta\\_thunberg\\_arrives\\_in\\_nyc\\_after\\_15\\_day\\_boat\\_trip](https://www.democracynow.org/2019/8/29/headlines/swedish_youth_climate_justice_activist_greta_thunberg_arrives_in_nyc_after_15_day_boat_trip) **29Aug2019**
- Greta15** Climate Activist Greta Thunberg Arrives in NYC to Fight ... **29Aug2019**  
**“Biggest Crisis Humanity Has Ever Faced”**  
[https://www.democracynow.org/2019/8/29/greta\\_thunberg\\_nyc\\_climate\\_activists](https://www.democracynow.org/2019/8/29/greta_thunberg_nyc_climate_activists)  
Interview together with Amy Goodman, Xiye Bastida, Alexandria Villaseñor, Svante Thunberg at Greta’s arrival in New York 29 Aug 2019. **In den Text.de und in den texto.es aufgenommen.**
- Greta12** **Meet 15-Year-Old Activist Greta Thunberg, Who Inspired a Global Movement**  
[https://www.democracynow.org/2018/12/11/meet\\_the\\_15\\_year\\_old\\_swedish](https://www.democracynow.org/2018/12/11/meet_the_15_year_old_swedish) **11Dec2018**



- Greta11** **“Our Leaders Are Behaving Like Children”:** Teen Climate Activist Confronts World Leaders at U.N. Summit **11Dec2018**  
[https://www.democracynow.org/2018/12/11/our\\_leaders\\_are\\_behaving\\_like\\_children](https://www.democracynow.org/2018/12/11/our_leaders_are_behaving_like_children)
- Greta10** **You Are Stealing Our Future: Greta Thunberg, 15, Condemns the World’s Inaction on Climate Change** [https://www.democracynow.org/2018/12/13/you\\_are\\_stealing\\_our\\_future\\_greta](https://www.democracynow.org/2018/12/13/you_are_stealing_our_future_greta) **13Dec2018**
- Greta08** **Greta Thunberg Urges French Lawmakers to Act on Climate Crisis** as Heat Wave Grips Europe, **Lecture in front of the French Parliament in Strasbourg, 23 July 2019**  
[https://www.democracynow.org/2019/7/24/headlines/greta\\_thunberg\\_urges\\_french\\_lawmakers\\_to\\_act\\_on\\_climate\\_crisis\\_as\\_heat\\_wave\\_grips\\_europe](https://www.democracynow.org/2019/7/24/headlines/greta_thunberg_urges_french_lawmakers_to_act_on_climate_crisis_as_heat_wave_grips_europe) 24Jul2019 **23Jul2019**
- Greta07** **“School strike for climate - save the world by changing the rules”** **24Nov2018**  
**TEDxStockholm am 24.Nov 2018** Text hier auf English, Original war Schwedisch. Deutsch Greta03  
**TEDx is an open-source community of independently organized events that inspire like-minded people.**  
[https://www.ted.com/talks/greta\\_thunberg\\_school\\_strike\\_for\\_climate\\_save\\_the\\_world\\_by\\_changing\\_the\\_rules/transcript](https://www.ted.com/talks/greta_thunberg_school_strike_for_climate_save_the_world_by_changing_the_rules/transcript)
- Greta06** Heads of state and global elites gathered for the World Economic Forum in Davos, Jan. 2019, **16-Year-Old Activist Greta Thunberg Demands Elites Act on Climate** **Jan2019**  
[https://www.democracynow.org/2019/1/24/headlines/16\\_year\\_old\\_activist\\_greta\\_thunberg\\_demands\\_elites\\_act\\_on\\_climate](https://www.democracynow.org/2019/1/24/headlines/16_year_old_activist_greta_thunberg_demands_elites_act_on_climate) 24Jan2019
- Greta05** Greta vor dem schwedischen Parlament, mit dem Schild „Skolstreik för Klimatet“:  
»Ich mache das, weil ihr Erwachsenen auf meine Zukunft scheißt. « **Aug2018**  
<https://utopia.de/greta-thunberg-zitate-128025/> 25Feb2019
- greta04** **Europäischer Wirtschafts- und Sozialausschuss, Brüssel, Belgien** **21Jan2019**  
[la Asamblea Mensual del Consejo Económico y Social Europeo, Bruselas, Bélgica)  
[https://www.eldiario.es/sociedad/Greta-Thunberg-ecologista-UE-estropicio\\_0\\_870363823.html](https://www.eldiario.es/sociedad/Greta-Thunberg-ecologista-UE-estropicio_0_870363823.html)  
**vom Spanischen ins Deutsche übersetzen !!**
- Greta03** **“School strike for climate - save the world by changing the rules”** **TEDxStockholm**  
Text hier auf Deutsch, Original war Swedish. Englisch siehe Greta07 **24Nov2018**  
**TEDx is an open-source community of independently organized events that inspire like-minded people.**  
[https://www.ted.com/talks/greta\\_thunberg\\_school\\_strike\\_for\\_climate\\_save\\_the\\_world\\_by\\_changing\\_the\\_rules/transcript?language=de](https://www.ted.com/talks/greta_thunberg_school_strike_for_climate_save_the_world_by_changing_the_rules/transcript?language=de)
- Greta02** **„Ich will, dass ihr in Panik geratet“** **Greta in Davos, Weltwirtschaftsforum im Jan. 2019,**  
Jahrestagung der Spitzenpolitiker und Wirtschaftsführer der Welt  
<https://www.welt.de/vermischtes/article187693472/Greta-Thunberg-in-Davos-Ich-will-dass-ihr-in-Panik-geratet.html> **25Jan2019**
- Greta01** Greta Thunberg, UN-Klimakonferenz, **Katowice, Polen, vollst. Rede am 13.Dec.2018,**  
»Der Wandel kommt, ob es euch gefällt oder nicht. « <http://www.kontext-tv.de/de/blog/greta-thunberg-zur-un-klimakonferenz-der-wandel-kommt-ob-ihr-wollt-oder-nicht>, 17Dec2018 **13Dec2018**

**Greta00** Greta Thunberg, UN-Klimakonferenz, Katowice, Polen, 13Dec2019

15-jährige Klimaschützerin: „**Die Älteren haben Chaos angerichtet**“

<https://www.tagesschau.de/schweden-klimaschutz-101.html>

**13Dec2018**

**Gretaxx** #fridaysforfuture

<https://fridaysforfuture.org/>

<https://www.fridaysforfuture.org/greta-speeches>

<https://www.google.com/search?q=Greta+Thunberg+speeches&oq=Greta+Thunberg+speeches&aqs=chrome..69i57j0l5.8079j0j7&sourceid=chrome&ie=UTF-8>

<https://youth4climate.be/en/projects/meerjarenplanning-participeer-waar-en-wanneer-je-wilt/process>

---

## Disclaimer und Impressum

Alle Angaben sind ohne jede Gewähr.

Aus diesem Text sind keinerlei Rechtsansprüche herleitbar.

Für die Inhalte externer Links bin ich nicht verantwortlich.

Ich stehe mit dem Thema in keinerlei Interessenkonflikt.

Der Text ist unter Quellenangabe beliebig verwendbar,  
beachte jedoch bitte die Urheberrechte der zitierten Quellen.

Joachim Felix Hornung, 8. Oktober 2019, joachimhornung(...)gmx(...)de

Am Rohrgarten 89, DE-14163 Berlin-Zehlendorf, Tel.+49-308338429

Hiermit bitte ich meine geeigneten Leserinnen und Leser,  
mir Ihre Kommentare, Fragen, Korrekturen und Ergänzungen mitzuteilen.

Vielen Dank im Voraus! JFH [www.mutual-mente.com](http://www.mutual-mente.com)

8. Oktober 2019, joachimhornung(...)gmx(...)de