



# Climate School Book of Sources

07/2021

**AXA Climate SAS**, a French simplified joint stock company (société par actions simplifiée) with a capital of €23,037,000 registered with the Paris Trade and Companies Register under No. 493 363 378, whose registered office is located at 61 rue Mstislav Rostropovitch, 75017 Paris, France.

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## 1. LISTE DES SCIENTIFIQUES INTERVENANTS DANS LA CLIMATE SCHOOL

- [Professor Alex King from Iowa State University and the US Department of Energy's Critical Materials Institute:](#)
- [Olivier Boucher, IPSL, Directeur de recherche au CNRS](#)
- [Professor Ralph Keeling, Scripps Oceanography](#)
- [Dr. Kerry Emmanuel, MIT](#)
- [Professor Timothy Lenton, PhD, University of Exeter](#)
- [Dr Emma Camp, Marine Biologist](#)
- [Dr Gerardo Ceballos, Universidad Nacional Autonoma de Mexico](#)
- [Prof Karen Hudson-Edwards, University of Exeter](#)
- [Bruno Parmentier, ancien Directeur de l'Ecole Supérieure d'Agriculture d'Angers](#)
- [Jean-Francois Gueguan, directeur de recherche à l'INRA](#)
- [Roger Frutos, Directeur de recherche au CIRAD](#)
- [Prof. Richard Seager, Columbia University](#)

## CLIMATE SCHOOL

### 1. The great acceleration

Jared Diamond: Collapse: How Societies Choose to Fail or Survive, 2004, Penguin

Laurent Testot: Cataclysmes: une histoire environnementale de l'humanité, 2017, Payot

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### 2. Balance 6'

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## 2. EPIC HISTORY OF EARTH

### 2.2 EPIC HISTORY OF EARTH 1 / 5'30

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### 2.4 Epic History 3 - 5 AM- 9/30PM in the life of Earth 5'30

Robert Hazen, The story of Earth : the first 4.5 billion years, from stardust to living planet. 2013, Penguin Books.

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### 2.5 EPIC HISTORY OF EARTH - 9:30 PM-23:59 PM 5'

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<https://news.mit.edu/2014/volcanic-eruption-dinosaur-extinction-1211>

## 3. THE GREAT CLIMATE SYSTEM

### 3.1 Weather or Climate?

Gilles Ramstein, Sylvestre Huet, le climat en 100 questions, Tallandier, 2020

[http://www.esa.int/ESA\\_Multimedia/Videos/2016/02/Carbon\\_flux%20](http://www.esa.int/ESA_Multimedia/Videos/2016/02/Carbon_flux%20)  
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### 3.2 The Great Climate SYSTEM

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### 3.3 Ice cores and natural forcings

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### 3.5 A steep, sharp and rapid rise: The Keeling Curve

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### 3.6 Energy Excess

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### 3.7 CONSEQUENCES TODAY

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Emanuel, K.A.(2007): What We Know About Climate Change, The MIT Press & Boston Review  
<https://earthobservatory.nasa.gov/world-of-change>  
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<https://archive.ipcc.ch/ipccreports/tar/w>  
<https://emanuel.mit.edu/papers-data-and-graphics-pertaining-tropical-cyclone-trends-and-variability> <https://www.carbonbrief.org/mapped-how-climate-change-affects-extreme-weather-around-the-world>  
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### 3.8 Predicting the future

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<http://cmc.ipsl.fr/online-resources/>

### 3.9 Tipping points

<https://www.nature.com/articles/d41586-019-03595-0>

## 4. THE OVEREXPLOITATION OF NATURAL RESOURCES

### 4.2 Energy - 6 min

-Géosciences – la dynamique du système Terre de Christian Robert et Romain Bousquet (Edition Belin)  
-Sciences de la Terre et de l'univers – André Brahic et al. (Edition Vuibert)  
-Hardin, Garrett. 1968. "The Tragedy of the Commons." Science  
- <https://halshs.archives-ouvertes.fr/halshs-02288208/document>

### 4.3 Energy sources- COAL 5'

<https://ourworldindata.org/fossil-fuels>

### 4.4 ENERGY SOURCES- OIL AND OTHERS 5'

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#### 4.5 SMARTPHONE 1 - WATER SUPPLY 5'

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<https://svs.gsfc.nasa.gov/3658>  
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[https://catalogue.unccd.int/587\\_mind-your-step-report-76803.pdf](https://catalogue.unccd.int/587_mind-your-step-report-76803.pdf)

#### 4.6 Smartphones 2 - WATER DEMAND 5'

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<http://eduterre.ens-lyon.fr/ressources/scenario1/planetebleue/savoir-plus1>  
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#### 4.7 SMARTPHONES 3 - GOLD & COPPER 6'

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#### 4.8 SMARTPHONES 4 - RARE EARTH & RECYCLING 7'

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#### 4.9 SMARTPHONES 5 - SAND AND CONCLUSION 5'

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[http://theoilage.org/wp-content/uploads/2020/02/article\\_33.pdf](http://theoilage.org/wp-content/uploads/2020/02/article_33.pdf)

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## 5. THE COLLAPSE OF BIODIVERSITY

### 5.1 THE MARVEL OF BIODIVERSITY 5'

<http://deepcarbon.net/>

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Giulia Enders, Darm mit Charme: Alles über ein unterschätztes Organ, Ullstein, 2017

### 5.2 WHAT IS BIODIVERSITY? 1 - Species - Ecosystems

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<https://www.soils4teachers.org/biology-life-soil>

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Elizabeth Kolbert, The Sixth Extinction: An Unnatural History, 2014, Henry Holt and Company

### 5.3 WHAT IS BIODIVERSITY2 - FOODCHAIN -GENETIC DIVERSITY 5'

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<https://berkeleysciencereview.com/article/trophic-thunder/>

<https://www.smithsonianmag.com/science-nature/what-happens-when-predators-disappear-32079553/>

<https://coral.org/coral-reefs-101/coral-reef-ecology/coral-reef-biodiversity/>

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<https://www.noaa.gov/education/resource-collections/marine-life/coral-reef-ecosystems>

<https://www.cirad.fr/en/news/all-news-items/press-releases/2020/response-danger-banana-fusarium-wilt>

[www.underwater.earth](http://www.underwater.earth)

### 5.4 Dynamics and evolution 7'

Elizabeth Kolbert, The Sixth Extinction: An Unnatural History, 2014, Henry Holt and Company

<https://www.lemhelfer.de/schuelerlexikon/biologie/artikel/gleichgewicht-oekologisches>

Christian Clot, Fabio Bono, Darwin à bord du Beagle, Glenat, 2016

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Baptiste Morizot, Manières d'être vivants, Actes Sud, 2020

### 5.5 EXTINCTION 5'

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National History Museum Data Portal  
National History Museum Data Portal  
IPBES Summary for policymakers : first global assessment 2019  
[www.underwater.earth](http://www.underwater.earth)

## 5.6 THE 6th EXTINCTION 1 - CAUSES 7' min

National History Museum Data Portal  
National History Museum Data Portal  
IPBES Summary for policymakers : first global assessment 2019  
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<https://ourworldindata.org/plastic-pollution>

## 5.7 The 6th extinction 2 - Tipping point? 6'

<https://www.pnas.org/content/117/24/13596>  
<https://www.nytimes.com/2020/06/01/science/mass-extinctions-are-accelerating-scientists-report.html>  
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<http://wetlandswatch.org/>  
<https://climate.copernicus.eu/harvester-seasons>  
<https://climate.copernicus.eu/global-shipping-project>  
<https://climate.copernicus.eu/offshore-wind-farm-operations-and-maintenance>  
<https://climate.copernicus.eu/impact-climate-change-cotton-industry>  
<https://climate.copernicus.eu/soil-erosion>  
[https://agriculture.basf.com/global/en/business-areas/urban-and-rural-pest-control/use\\_areas/rural-pest-control.html](https://agriculture.basf.com/global/en/business-areas/urban-and-rural-pest-control/use_areas/rural-pest-control.html)

### 6.3 FOCUS ON NORFOLK 4' VOIX OFF FEMME

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[https://riskfinder.climatecentral.org/place/norfolk.va.us?comparisonType=place&forecastType=NAAA2017\\_int\\_p50&level=6&unit=ft](https://riskfinder.climatecentral.org/place/norfolk.va.us?comparisonType=place&forecastType=NAAA2017_int_p50&level=6&unit=ft)

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<http://www.fao.org/3/ca1334en/CA1334EN.pdf>

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[Andreas Ebert, Jerry Hatfield, Danny Hunter, Shyam Yadav and Robert Redden, Food Security and Climate Change, John Wiley and Sons \(2019\)](#)

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