

China, Climate Change and the Final Decades of International Tourism

Farewell Lecture of Prof. Dr. Wolfgang Georg Arlt FRGS FRAS

China Outbound Tourism Research Institute



Prof. Dr. Wolfgang Georg Arlt FRGS
COTRI / West Coast University of Applied Sciences Germany, Heide

**Climate Change
and Urban Tourism**

Zhejiang University
2009 China International
Leisure Development Forum,
Hangzhou/China



Powered by IMT GmbH
made to management technology

Wolfgang Georg Arlt
China's Outbound Tourism and Climate Change

University of Brighton Conference

Eastbourne 2009

CONTENT

- 1) Since 17th century development of capitalism, globalisation
Since 19th century acceleration of growth in human population, consumption of resources, CO² emissions and other pollutants, concentration of wealth
- 2) Since 17th century development of Westphalian principles of national sovereignty
Since 19th century development of nationalism, development of only weak post-Westphalian institutions, in 21st c. even decreasing in influence (UN, WTO)
- 3) Since 18th century development of democratic government structure, after decolonisation for majority of countries in the world
In 21st century function of democratic institutions weakened by online media and lack of political education resulting in elections of OWM and celebrities not representing the interests of their voters

CONTENT

4) Current situation:

- Development of economy based on growth and particular interests in finite environment (one planet) without functioning checks and balances.
- No institutions existing to execute necessary actions, not even to the politically agreed level of necessity (Club of Rome 1972, Rio 1992, Kyoto 1997, Paris 2015)
- 21st c. climate change tipping points one by one reached, resulting in accelerating and self-reinforcing development of climate change

5) International tourism:

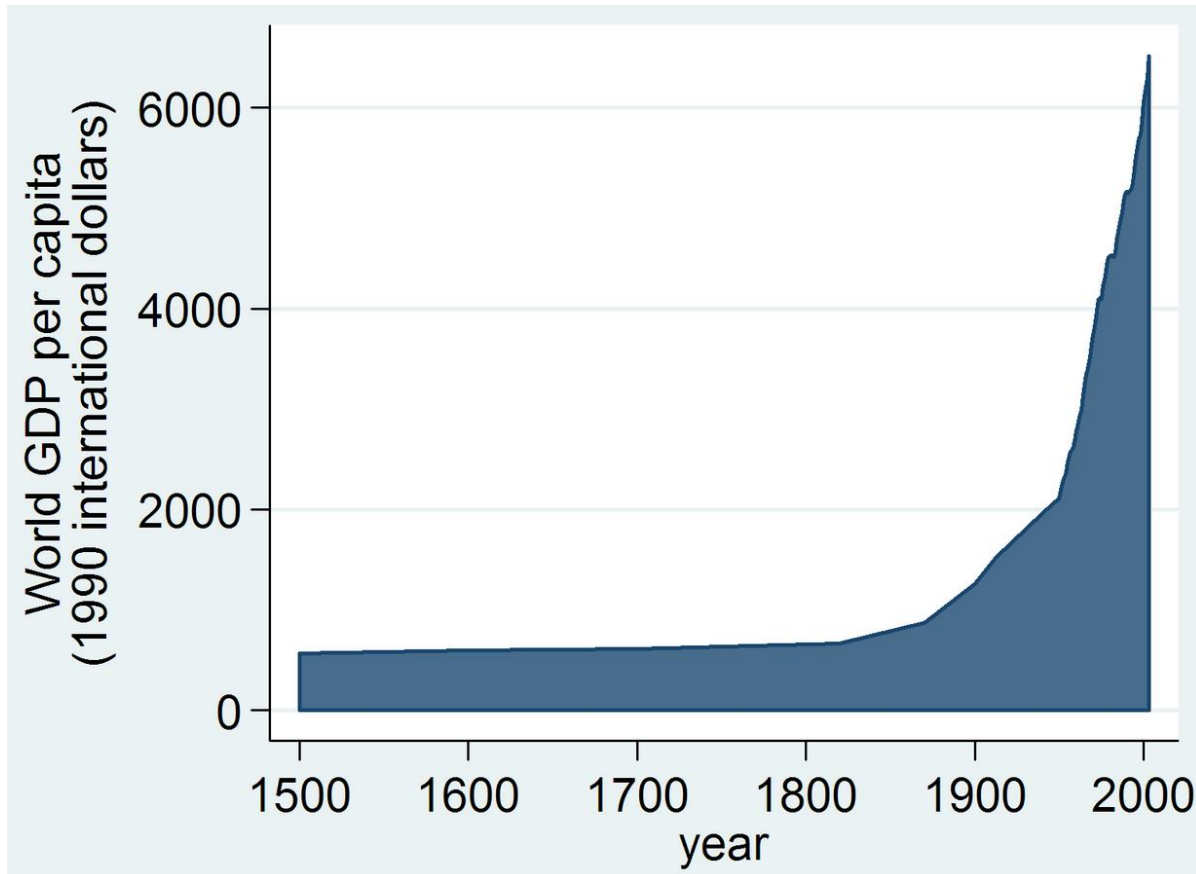
- Latecomer in globalisation, only in last 50 years globally relevant influence on GDP, jobs, culture changes, pollution
- in last 20 years powered by Chinese outbound tourism

CONTENT

- 6) Development up to ca. 2060:
 - Irreversible changes, each tipping point passed resulting in more severe consequences
 - Countered by symbolic and post-event activities only
 - Results of climate change plus aging global societies and peak points for several resources crashing global economy, ending the episode of 1B+ human beings on Planet Earth.
 - Tourism: After two decades of China-powered growth, non-ground based leisure tourism ending in 2040s, international tourism almost ending in 2050s, including Chinese outbound tourism

China, Climate Change and the Final Decades of International Tourism

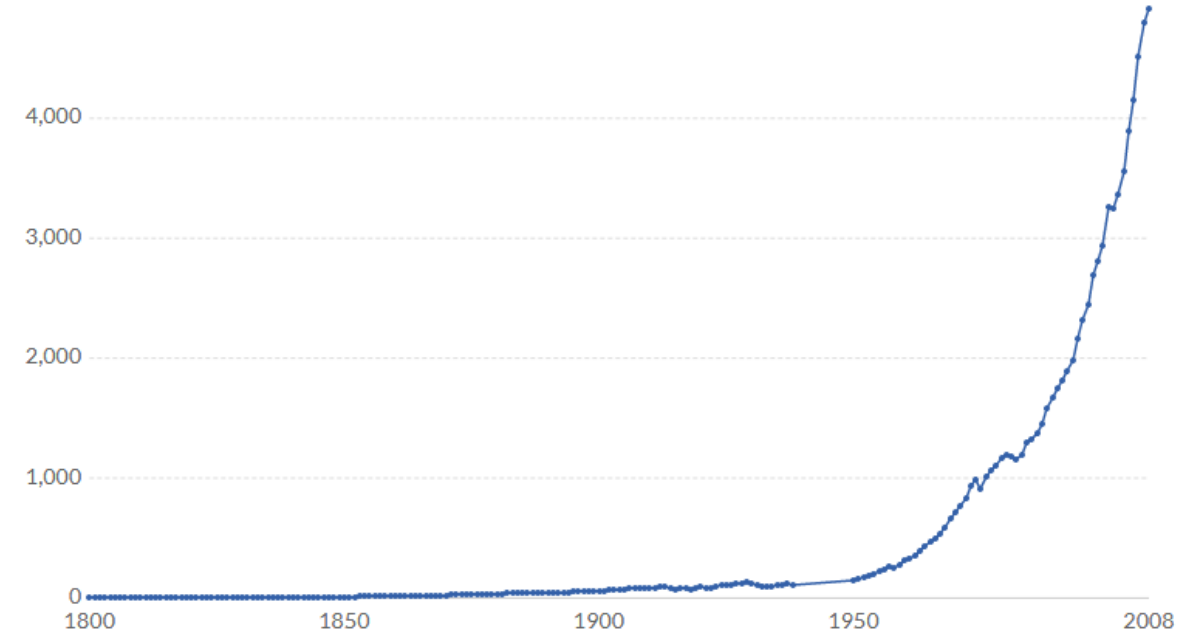
- 1) Since 17th century development of capitalism, globalisation
Since 19th century acceleration of growth in human population, consumption of resources, CO² emissions and other pollutants, concentration of wealth



The value of global exports

Time series of value of world exports at constant prices, relative to 1913 (i.e. values correspond to world export volumes indexed at 1913=100)

LINEAR



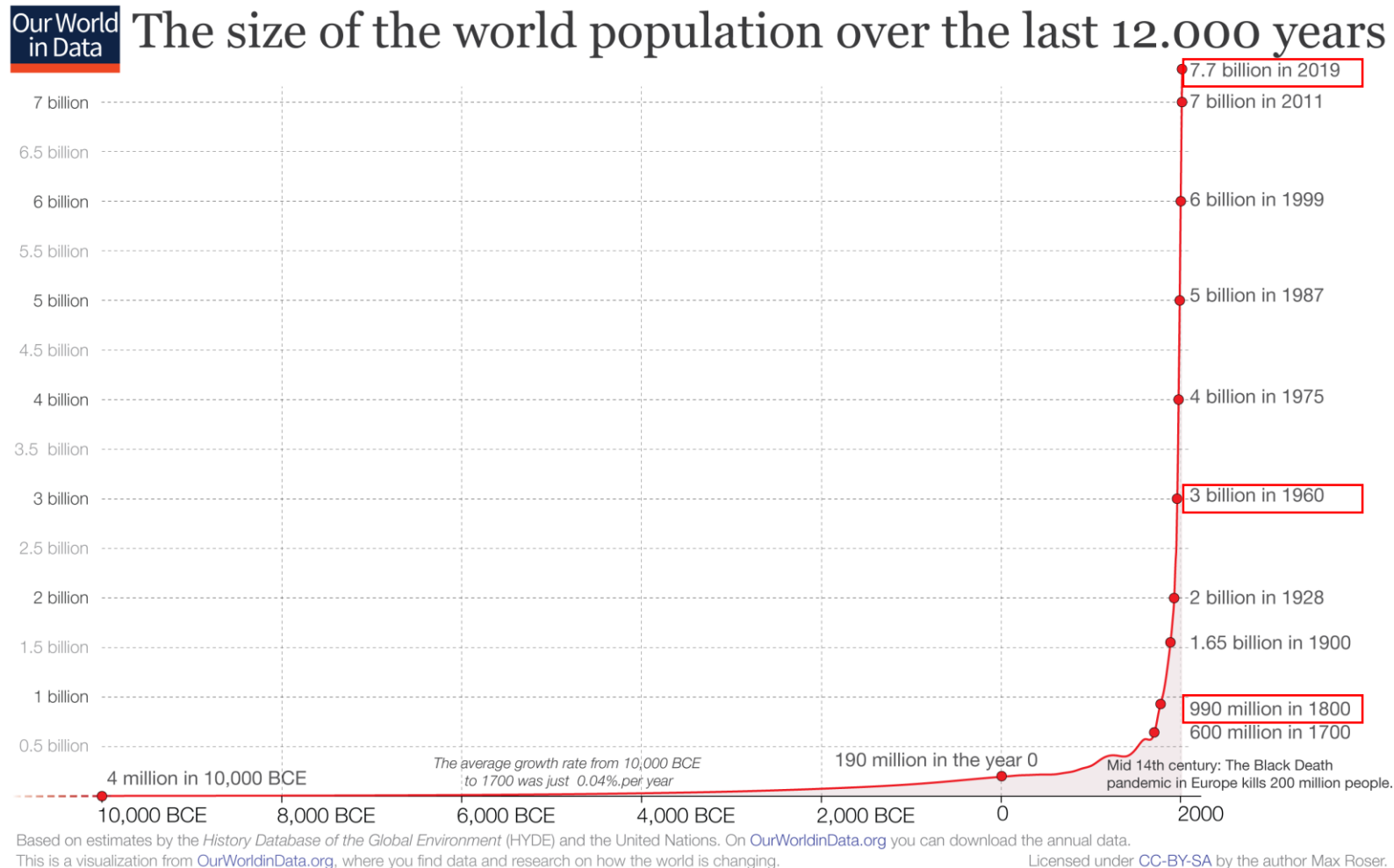
Source: Federico and Tena-Junguito (2016)

Our World
in Data

CC BY

China, Climate Change and the Final Decades of International Tourism

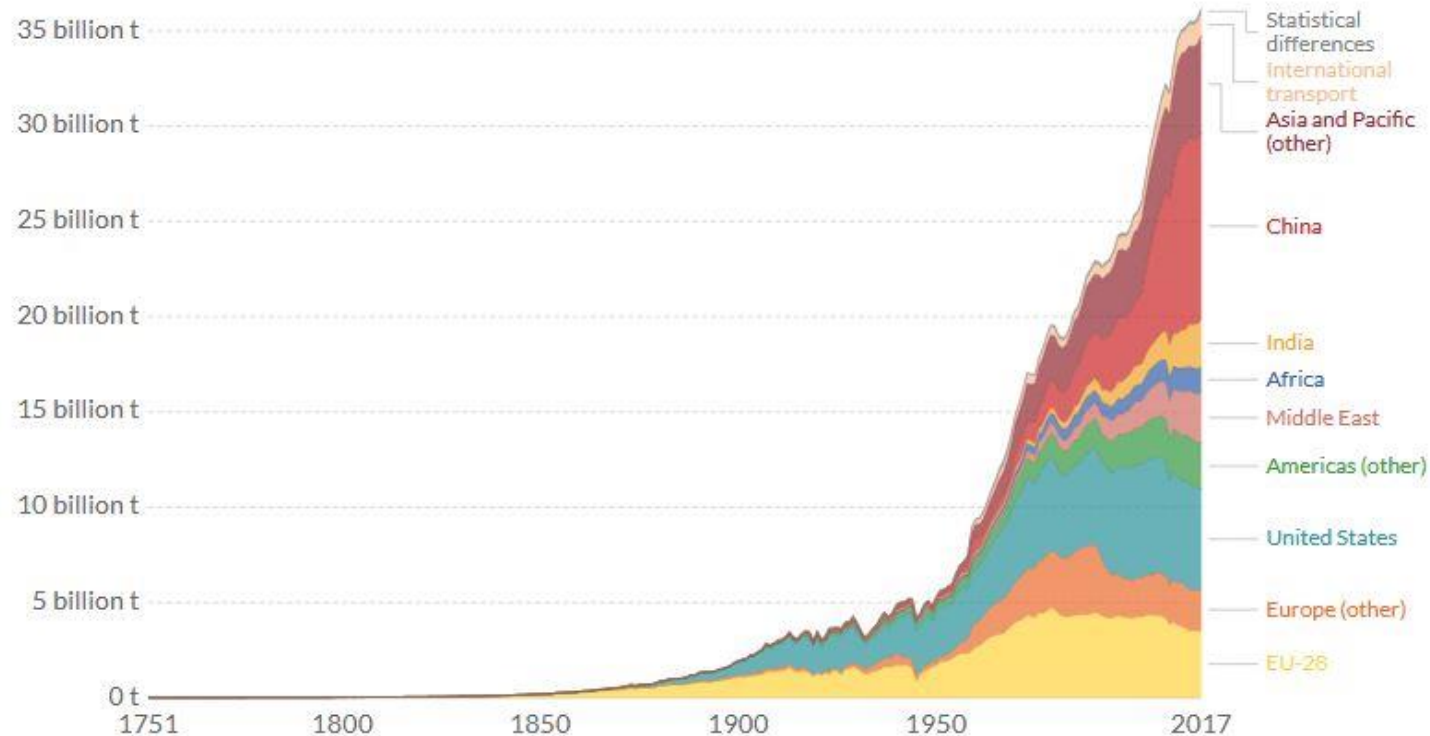
- 1) Since 17th century development of capitalism, globalisation
Since 19th century acceleration of growth in human population, consumption of resources, CO² emissions and other pollutants, concentration of wealth



China, Climate Change and the Final Decades of International Tourism

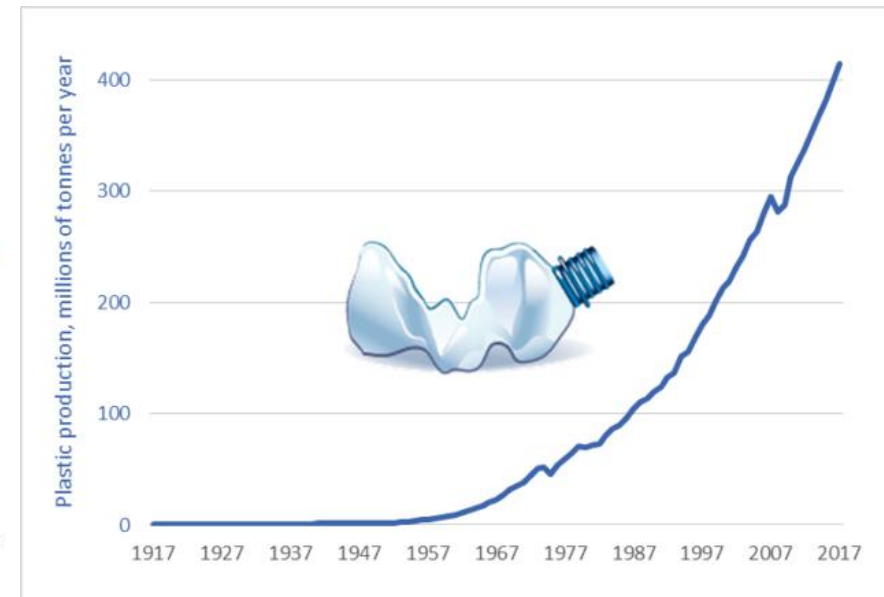
- 1) Since 17th century development of capitalism, globalisation
Since 19th century acceleration of growth in human population, consumption of resources, CO² emissions and other pollutants, concentration of wealth

Annual total CO₂ emissions, by world region



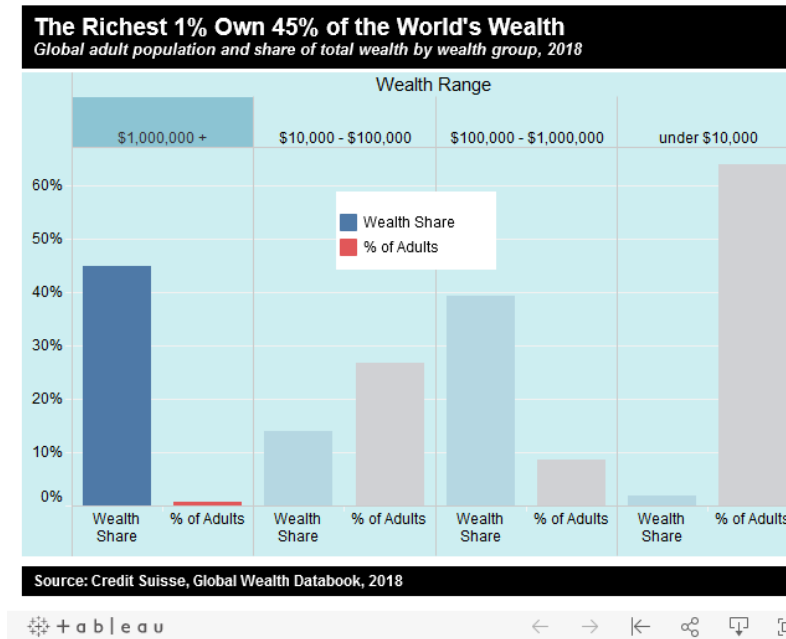
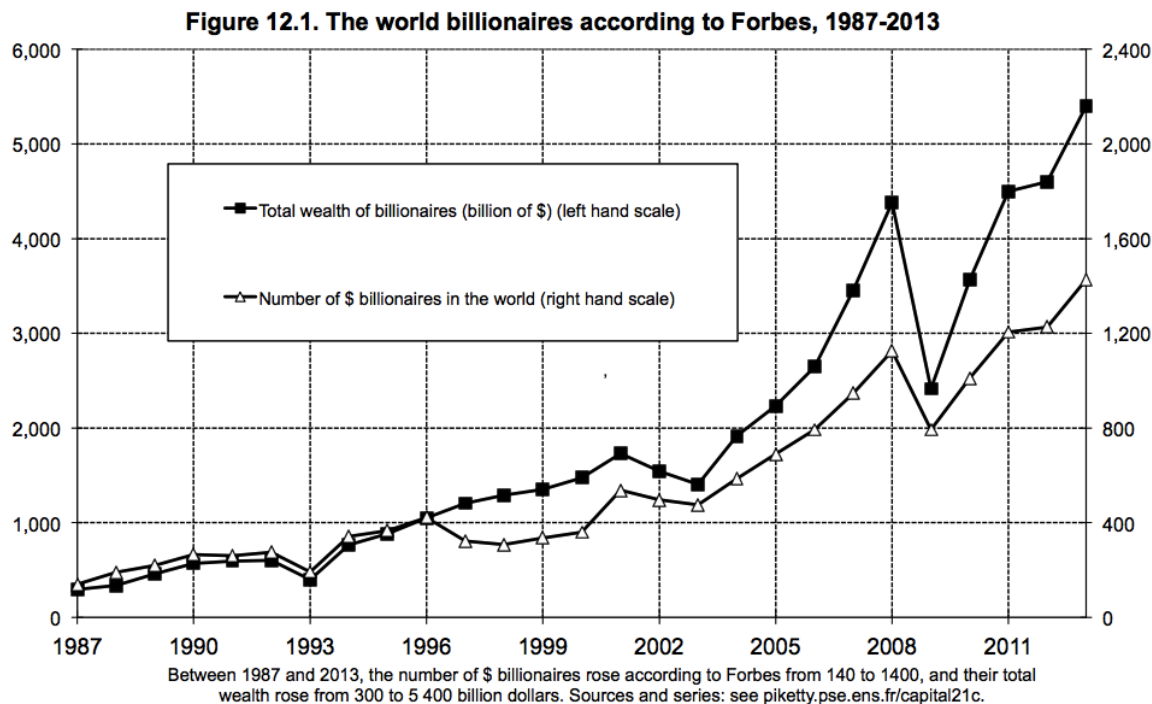
Source: Carbon Dioxide Information Analysis Center (CDIAC); Global Carbon Project (GCP)
Note: "Statistical differences" notes the discrepancy between estimated global emissions and the sum of all national and international transport emissions.

CC BY



China, Climate Change and the Final Decades of International Tourism

- 1) Since 17th century development of capitalism, globalisation
Since 19th century acceleration of growth in human population, consumption of resources, CO² emissions and other pollutants, concentration of wealth



The world's richest 1 percent, those with more than \$1 million, own 45 percent of the world's wealth. Adults with less than \$10,000 in wealth make up 64 percent of the world's population but hold less than 2 percent of global wealth. The world's wealthiest individuals, those owning over \$100,000 in assets, total less than 10 percent of the global population but own 84 percent of global wealth. Credit Suisse defines "wealth" as the value of a household's financial assets plus real assets (principally housing), minus their debts.

China, Climate Change and the Final Decades of International Tourism

- 2) Since 17th century development of Westphalian principles of national sovereignty
Since 19th century development of nationalism, development of only weak post-Westphalian institutions, in 21st c. even decreasing in influence (UN, WTO)



On September 19, 2017, US President Donald Trump delivered a speech to the United Nations (UN) General Assembly where he highlighted sovereignty as the guiding principle of international relations. He cited the word over 21 times and declared, “Success depends on a coalition of strong and independent nations that embrace their sovereignty to promote security, prosperity, and peace for themselves and for the world.”

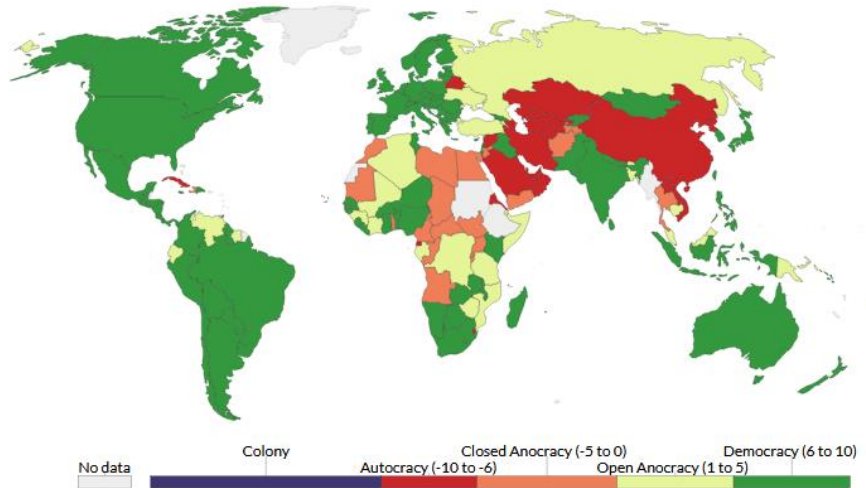
China, Climate Change and the Final Decades of International Tourism

- 3) Since 18th century development of democratic government structure, after decolonisation for majority of countries in the world
In 21st century function of democratic institutions weakened by online media and lack of political education resulting in elections of OWM and celebrities not representing the interests of their voters

Political Regime, 2015

The scale goes from -10 (full autocracy) to 10 (full democracy). Anocracies are those scoring between -5 and 5. "Colony" (coded as -20) includes not only colonies, but also countries that were not yet sovereign states (e.g. the Czech Republic and Slovakia in 1945-92).

Our World
in Data



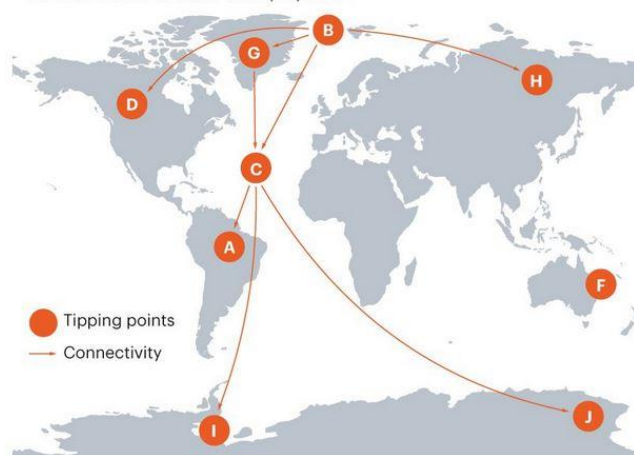
China, Climate Change and the Final Decades of International Tourism

4) Current situation:

- Development of economy based on growth and particular interests in finite environment (one planet) without functioning checks and balances
- No institutions existing to execute necessary actions, not even to the politically agreed level of necessity (Club of Rome 1972, Rio 1992, Kyoto 1997, Paris 2015)
- 21st c. climate change tipping points one by one reached, resulting in accelerating and self-reinforcing development of climate change

RAISING THE ALARM

Evidence that tipping points are under way has mounted in the past decade. Domino effects have also been proposed.



- | | | |
|---|--|--|
| A. Amazon rainforest
Frequent droughts | D. Boreal forest
Fires and pests changing | H. Permafrost
Thawing |
| B. Arctic sea ice
Reduction in area | F. Coral reefs
Large-scale die-offs | I. West Antarctic ice sheet
Ice loss accelerating |
| C. Atlantic circulation
In slowdown since 1950s | G. Greenland ice sheet
Ice loss accelerating | J. Wilkes Basin, East Antarctica
Ice loss accelerating |

©nature

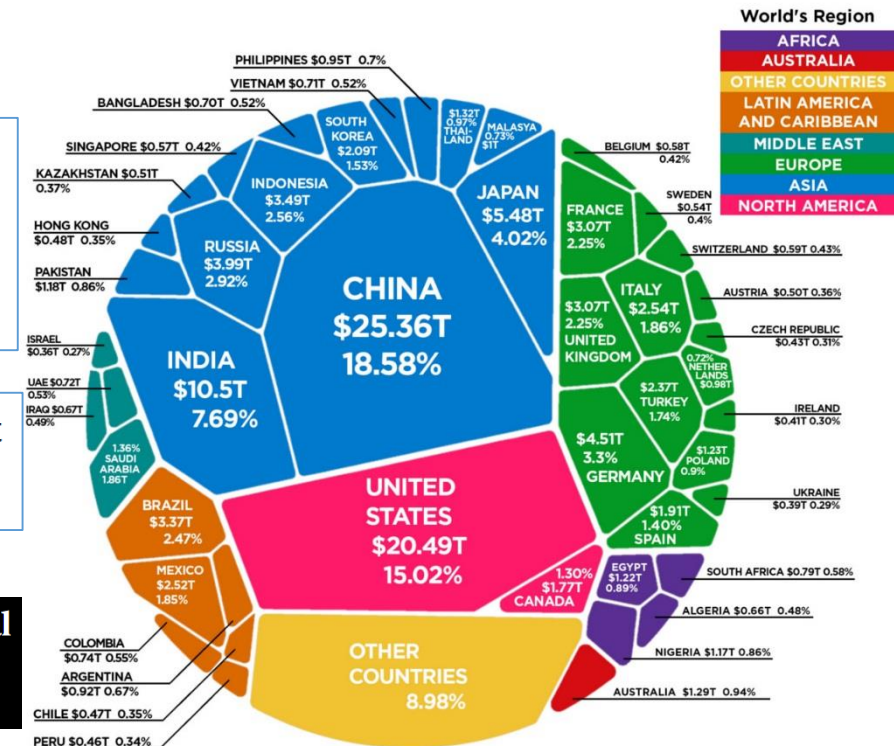
Source: T. M. Lenton et al.

Failure In Madrid As COP25 Climate Summit Ends In Disarray

Germany to miss 2030 climate goal without coal phase out

Australia wildfires: PM Scott Morrison defends coal industry amid catastrophic blazes

'I am not going to write off the jobs of thousands of Australians', Morrison says as wildfires continue to rage



Article & Sources:

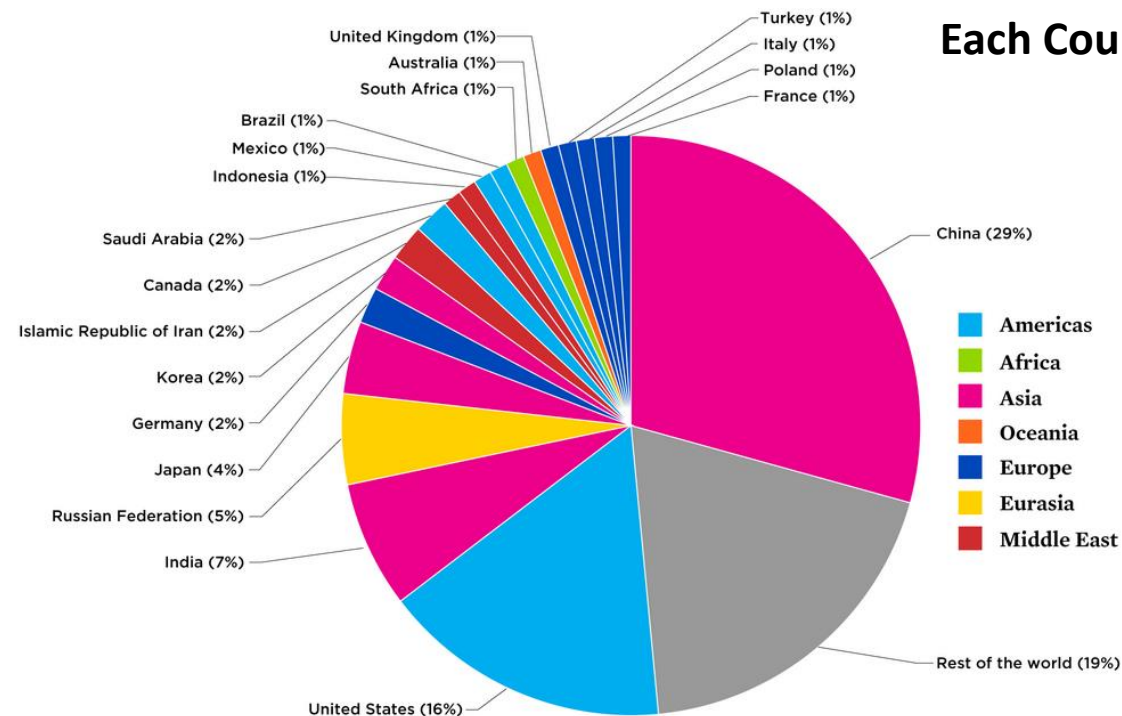
<https://howmuch.net/articles/the-world-economy-gdp-2018>
The World Bank - <https://databank.worldbank.org>

howmuch.net

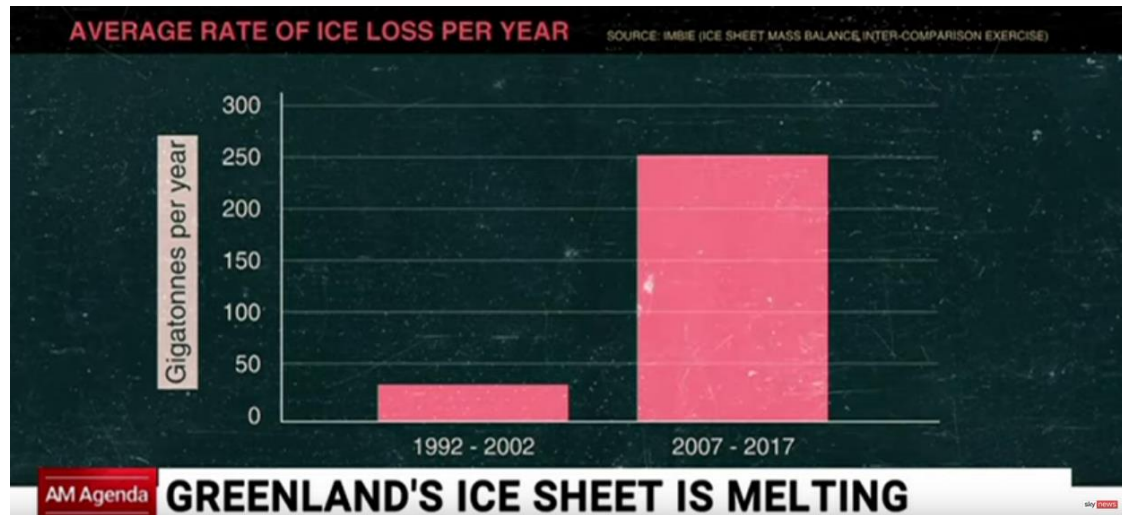
China, Climate Change and the Final Decades of International Tourism

4) Current situation:

- Development of economy based on growth and particular interests in finite environment (one planet) without functioning checks and balances
- No institutions existing to execute necessary actions, not even to the politically agreed level of necessity (Club of Rome 1972, Rio 1992, Kyoto 1997, Paris 2015)
- 21st c. climate change tipping points one by one reached, resulting in accelerating and self-reinforcing development of climate change



China, Climate Change and the Final Decades of International Tourism



<https://www.youtube.com/watch?v=Kd7da-NBPjA>

Is the Gulf Stream System slowing?



most abrupt and impactful events in the history of climate". During the last Ice Age, winter temperatures changed by up to 10 degrees within three years in some places. The

More Than One Billion Animals Have Been Killed in Australia's Wildfires, Scientist Estimates

Some researchers believe the number could be 'a very conservative figure'

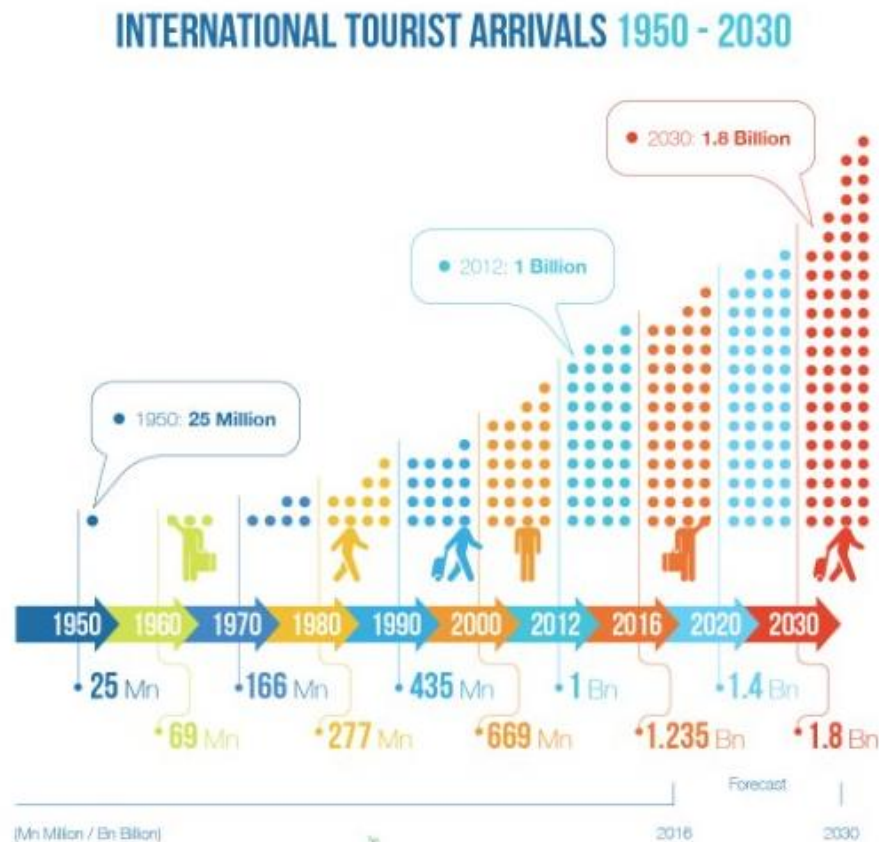


China, Climate Change and the Final Decades of International Tourism

5) International tourism:

- Latecomer in globalisation, only in last 50 years globally relevant influence on GDP, jobs, culture changes, pollution
- in last 20 years powered by Chinese outbound tourism

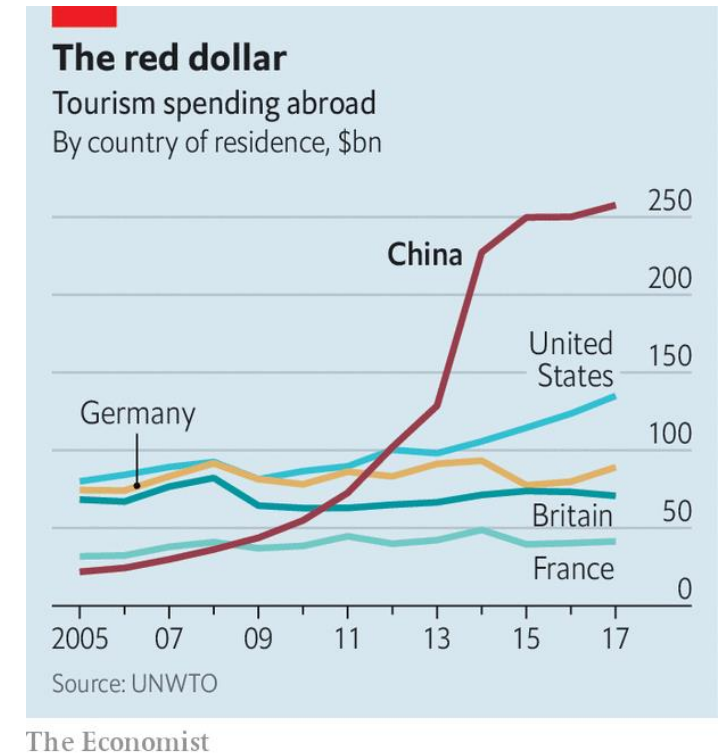
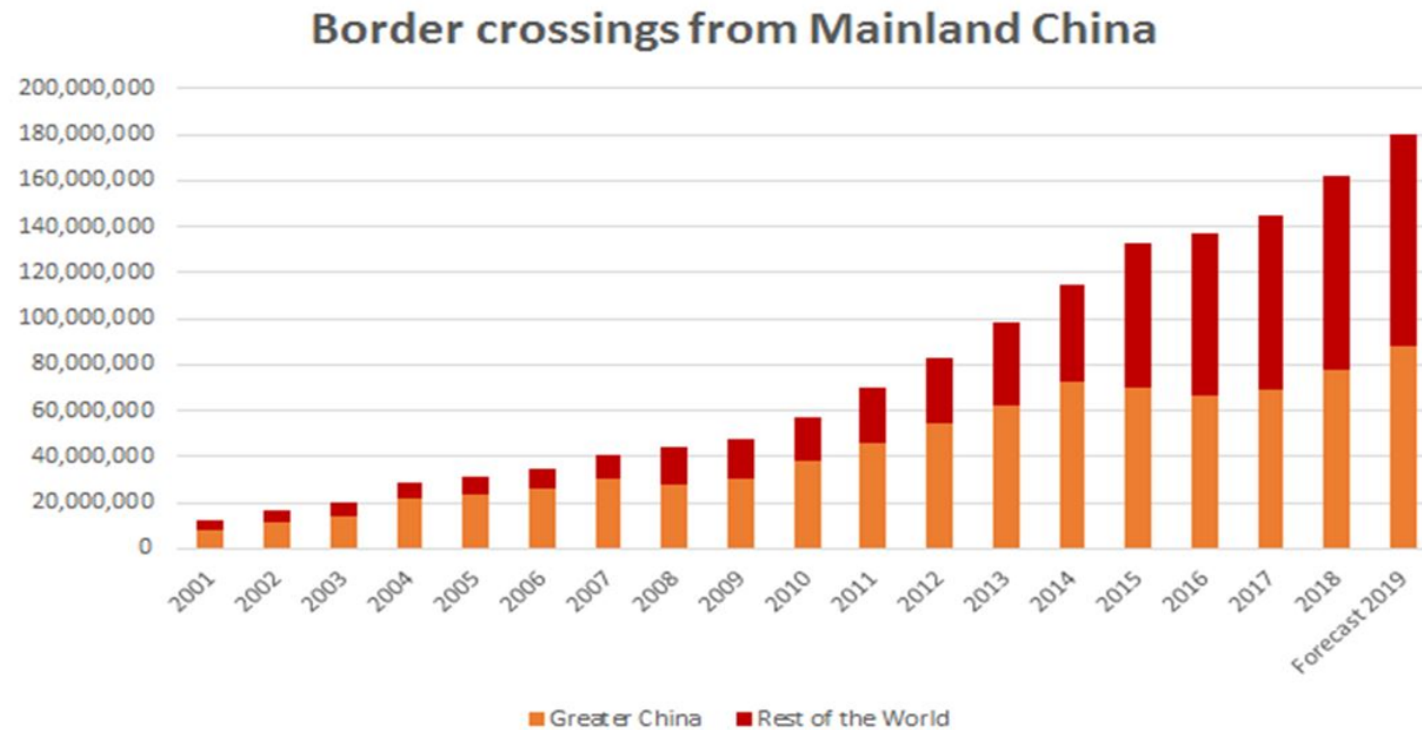
Tourism generates USD 5 billion a day in exports



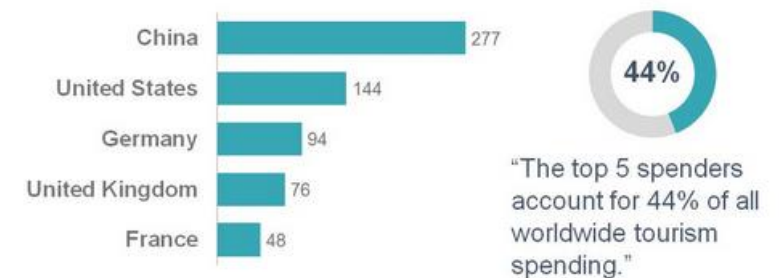
China, Climate Change and the Final Decades of International Tourism

5) International tourism:

- Latecomer in globalisation, only in last 50 years globally relevant influence on GDP, jobs, culture changes, pollution
- in last 20 years powered by Chinese outbound tourism



Top international tourism spenders 2018



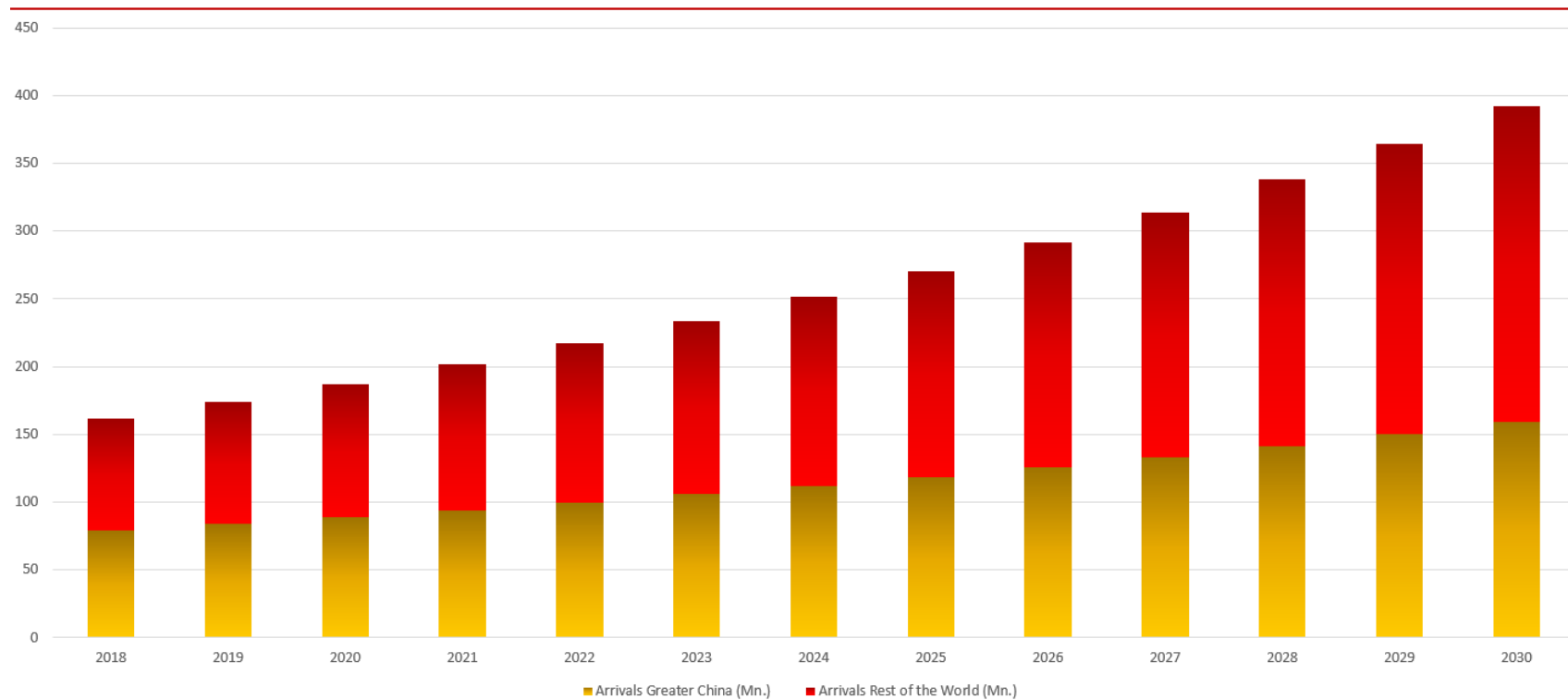
Source: World Tourism Organization (UNWTO)

China, Climate Change and the Final Decades of International Tourism

5) International tourism:

- Latecomer in globalisation, only in last 50 years globally relevant influence on GDP, jobs, culture changes, pollution
- in last 20 years powered by Chinese outbound tourism

China's Outbound Tourism 2019-2030 (COTRI Forecast)

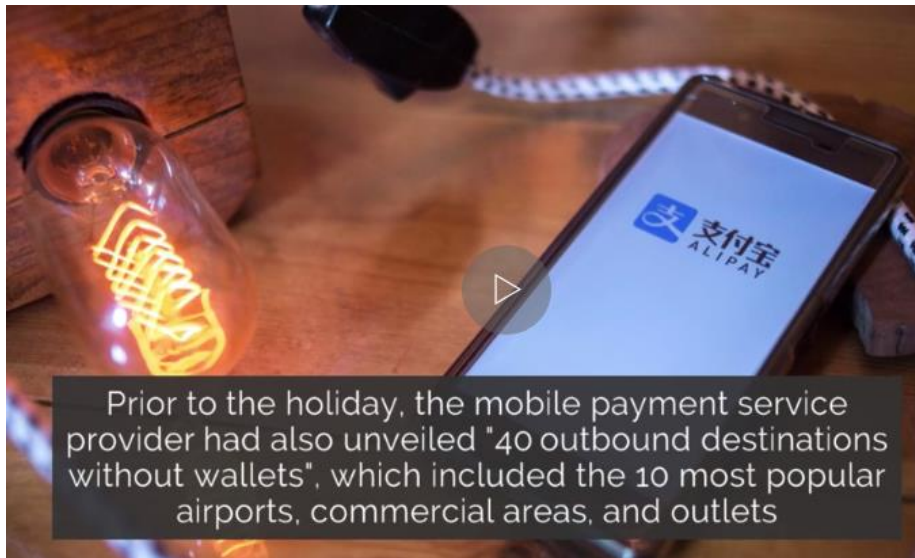


China, Climate Change and the Final Decades of International Tourism

5) International tourism:

- Latecomer in globalisation, only in last 50 years globally relevant influence on GDP, jobs, culture changes, pollution
- in last 20 years powered by Chinese outbound tourism

U.S. Airlines Are Editing Their Websites to Remove Taiwan's Name at China's Request



Dubai Duty Free celebrates Chinese New Year in style

By Hibah Noor

Like SHARE SAVE PRINT



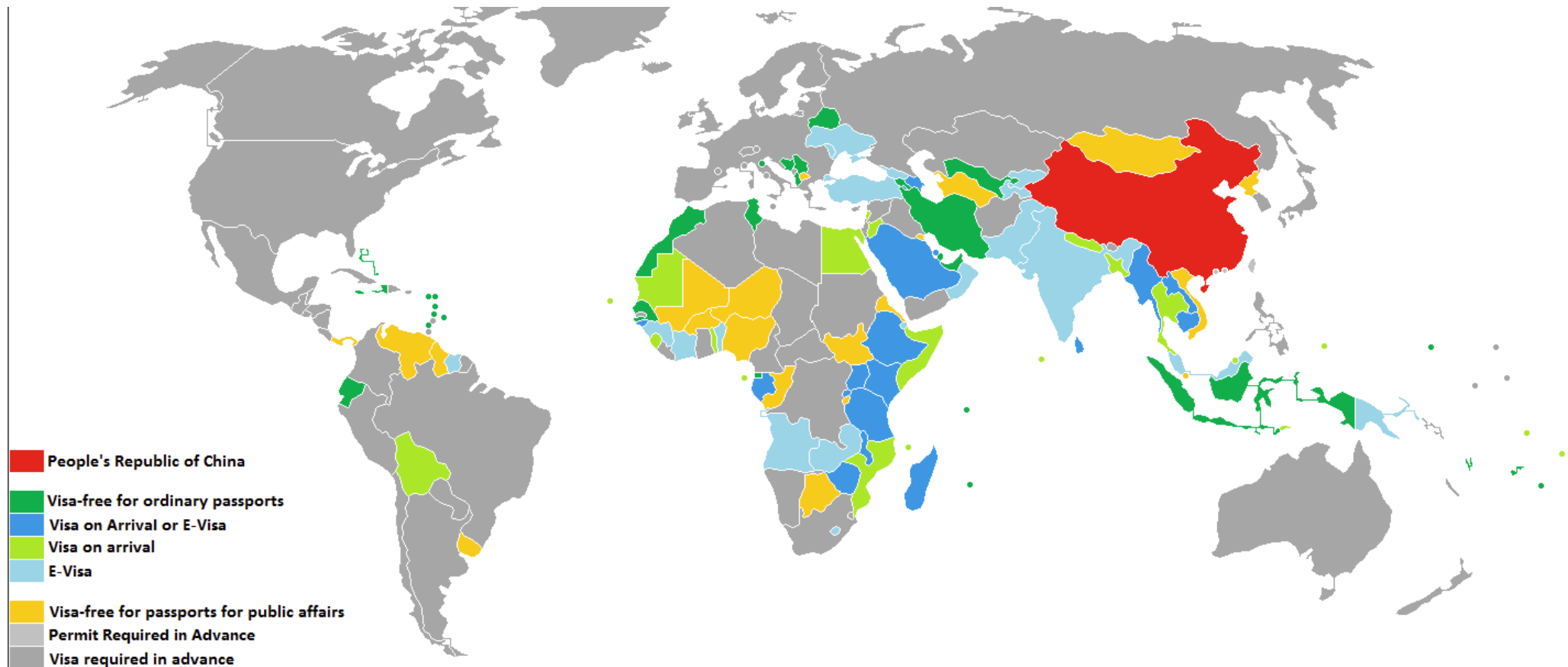
Dubai Duty Free executives and officials from the Chinese Consulate to Dubai with Chinese staff and dancers



China, Climate Change and the Final Decades of International Tourism

5) International tourism:

- Latecomer in globalisation, only in last 50 years globally relevant influence on GDP, jobs, culture changes, pollution
- in last 20 years powered by Chinese outbound tourism



5) International tourism:

- Latecomer in globalisation, only in last 50 years globally relevant influence on GDP, jobs, culture changes, pollution
- in last 20 years powered by Chinese outbound tourism

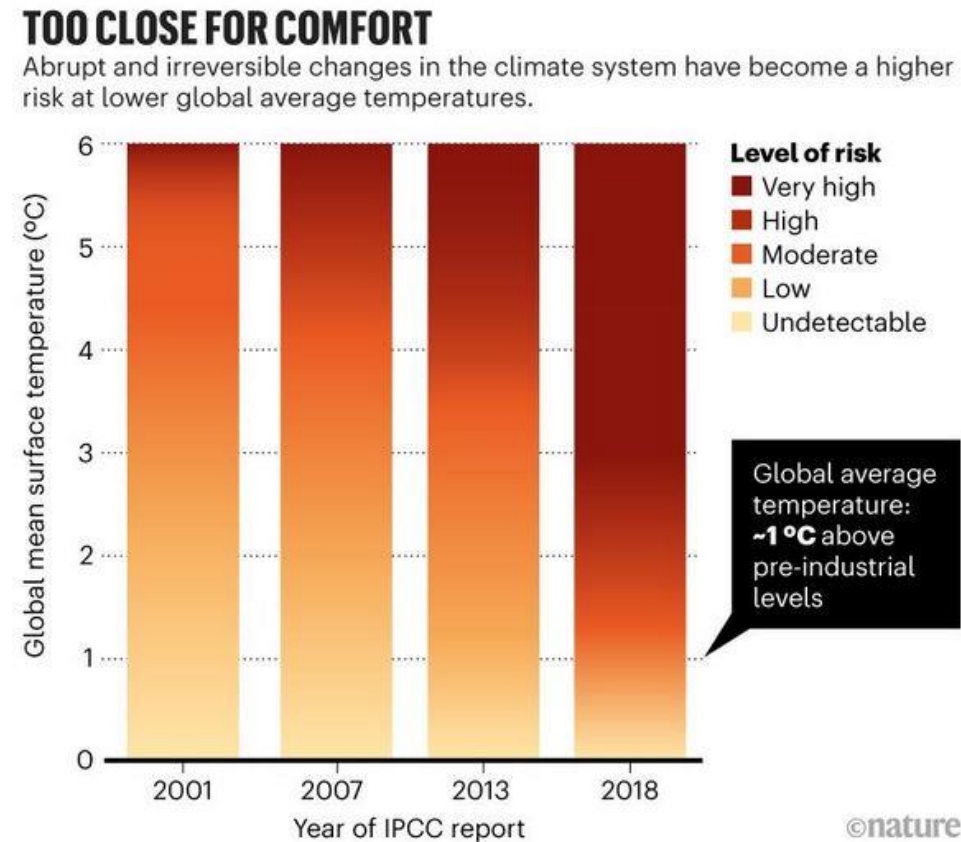
China

- Country with highest level of wind and solar power production
- Main producer of wind and solar power production equipment
- Country with highest number of electric vehicles
- But: 18% of global population producing 29% of CO²



6) Development up to ca. 2060:

- Irreversible changes growing with regard to severity of consequences
- Countered by symbolic and post-event activities only
- Results of climate change plus aging global societies and peak points for several resources crashing global economy, ending the episode of 1B+ human beings on Planet Earth.



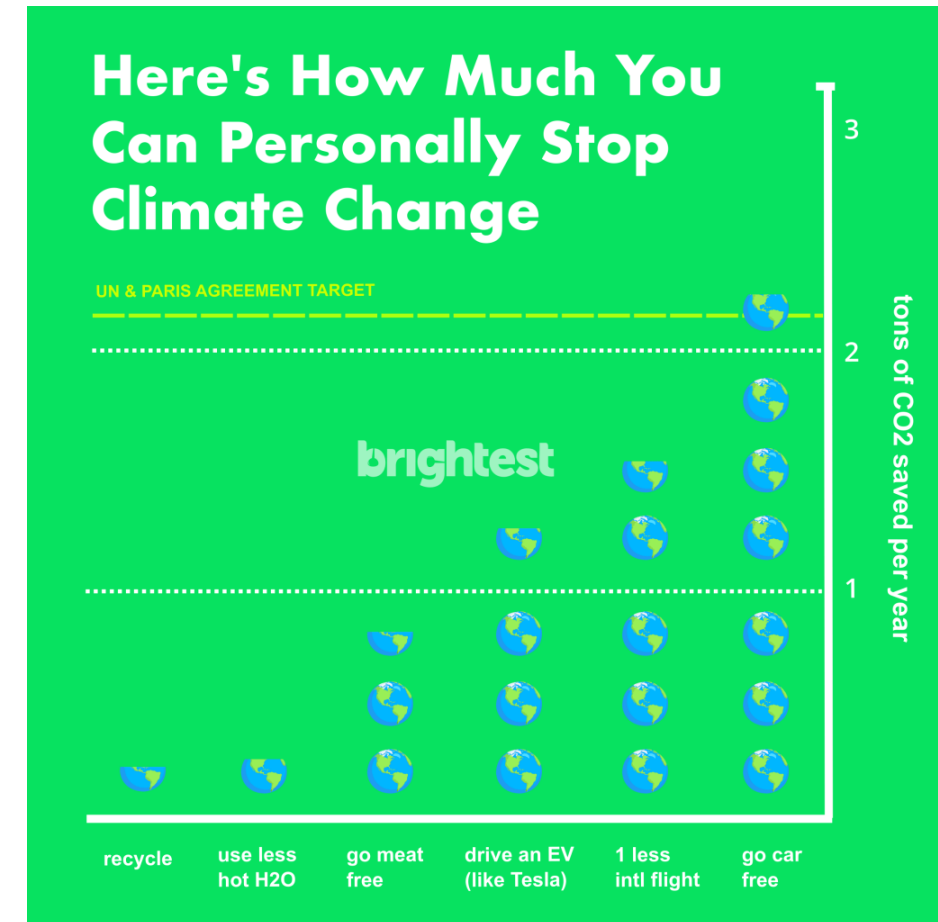
China, Climate Change and the Final Decades of International Tourism

6) Development up to ca. 2060:

- Irreversible changes, each tipping point passed resulting in more severe consequences
- Countered by symbolic and post-event activities only
- Results of climate change plus aging global societies and peak points for several resources crashing global economy, ending the episode of 1B+ human beings on Planet Earth.

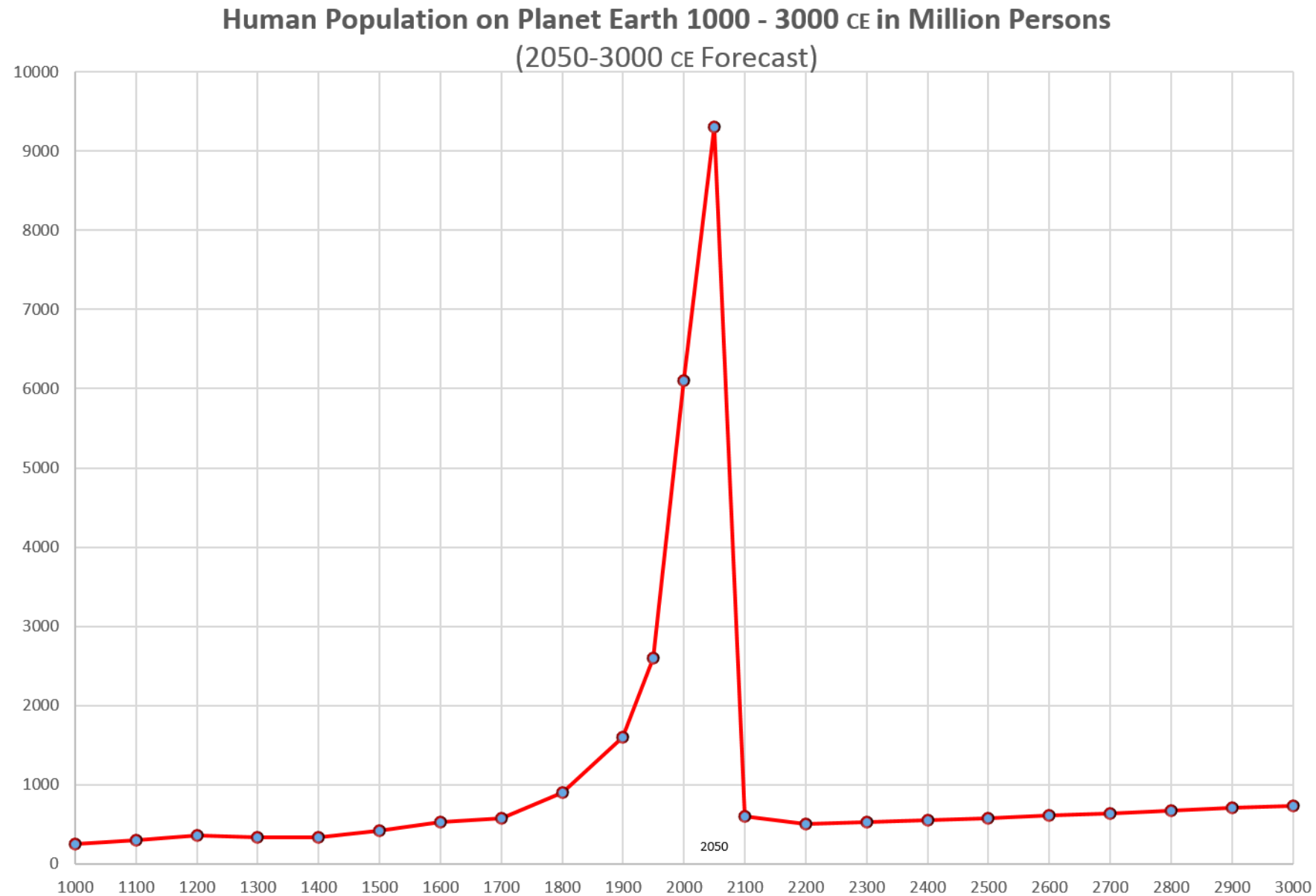


Pollution share Air transport 3%
(in comparison: pollution from
energy production needed for
online videos 4%, of which
2% Youtube, 1% Porn, 1% other)



China, Climate Change and the Final Decades of International Tourism

6) Development up to ca. 2060: ending the episode of 1B+ human beings on Planet Earth.



China, Climate Change and the Final Decades of International Tourism

- 6) Tourism: After two decades of China-powered growth, non-ground based leisure tourism ending in 2040s, international tourism almost ending in 2050s, including Chinese outbound tourism



China, Climate Change and the Final Decades of International Tourism



International
Labour
Organization



1.2 billion

jobs depend on a stable and healthy environment. Jobs industries like agriculture, fisheries and forestry, but also tourism, pharmaceuticals and others depend on natural environmental processes.



THANK YOU VERY MUCH FOR YOUR ATTENTION!

$$\Delta S \geq 0$$

In the end, it all comes down to the Second Law of Thermodynamics: Entropy is a non-reversible process

Carpe diem quam minimum credula postero

