THE CLIMATE EMERGENCY REQUIRES THE REVERSAL OF PRIORITIES

A famous Ecole Polytechnique graduate on all television sets is calling for a halt to all air travel to save the planet with only four flights per life. But AIRLINE PILOTS have the opportunity to put an end to the unbearable Climate Runaway that our planet suffers year after year without stopping air transport.

The MIT, Massachusetts Institute of Technology University of Cambridge Research, located near Boston, has defined in 2023 a schedule to **achieve the objectives of sustainable aviation by 2030**. There are five years left to chart a new future for aviation. (You can see the study carried out on https://report.aiazero.org/). Indeed, they have identified that the impact on the global climate of stratospheric aviation trails is **an accelerator of global warming**. And there is an urgent need to address this Acceleration of Global Warming as a priority without going through decarbonization by SAF fuels. There is a reversal of priorities, first we deal with stratospheric water vapor and subsidiarily carbon dioxide.

In France and Europe, runaway climate change is on a trend of +3 to +4°C from 2030. And the government has published the PNACC-3 to adapt to a warming of +4°C in 2100.

As early as 2019, I also identified that Global Air Transport is at the origin of the climate runaway that we are currently experiencing. In August 2019, I filed a patent with the INPI for an invention to fight against global warming and excess water vapour. **The title of my invention is, Coastal Weather Phenomenon Management Facility.** On April 21, 2023, the INPI recognized the accuracy of my work and issued me the national patent. On April 3, 2024, it was the turn of the European Patent Office in Munich to recognize my work and I was granted a Single European Patent.

In a direct reading of NASA's temperature records by hemisphere, we can see linear variations at the beginning of global warming and then, since 1992, differential variations in temperatures in the Northern Hemisphere compared to the Southern Hemisphere. In mathematics, a linear variation is equivalent to solving an

equation with one unknown and for a differential variation, we must solve a differential equation with two unknowns. Thus, we see:

- on the one hand, that the greenhouse gas CO2 is the main cause of the Initial and Linear Global Warming (unknown RC) of the two hemispheres. This is visible as early as 1967 on the NASA/GISS/GISTEMP v4 temperature curve.
- and on the other hand, that the greenhouse gas solely responsible for Runaway Climate Change (unknown EC) is none other than water vapour. What can be seen on the same curve is that runaway climate change began in 1992. And this is confirmed by the MIT publication of April 2023.

I proposed a calculation of the PARCEL of water vapor (Acceleration Power of Global Warming and/or Localized Runaway) as a function of the temperature variation:

Var T +1°C. +2°C +3°C. +4°C. +5°C

Parcel 2,53 5,23 8,97 11,21 14,52

Average simulation parcel equal to 10 between 2 and 5°C.
Some figures in 2022, it was calculated that 12,700 billion tons of water vapor were suspended in the atmosphere for a positive temperature variation of 1.21°C compared to the end of the 19th beginning of the 20th century. In 2023, this temperature climbed to 1.36°C and 133.4 billions tons of additional water vapor accumulated in the atmosphere.
In 2024, the hottest year of the century, the thermometer jumped to 1.57°C and the atmosphere stored an additional 195.5 billions tonnes of water vapour.
In summary, for the two main greenhouse gases, in billions of tonnes in the atmosphere, we find:

	Water vapor H2O	Carbon dioxide CO2	
	Billion tonnes	Billion tonnes	Proportion
Greenhouse effect	**60%**	**26%**	**x 2.308**
2022 >	**12,700**	**3258**	**x 3,898**
2023 >	**+ 133.4**	**36.8**	**x 3.625**
2024 >	**+ 195.5**	**37.4**	**x 5.227**

The acceleration in 2024 is phenomenal and in the ratio of masses, the additional annual mass of water vapor suspended in the atmosphere is more than 5 times that of CO2. Extreme weather events in 2024 :

Dry since 1970, the refilling of Lake Iriqui in southern Morocco by torrential rains in the Sahara. Abundant snow in the Al-Jawf desert in Saudi Arabia has raised questions among climatologists.

In November, climate bombs devastated the northwest of the American continent. Closer to home, cold drops at altitude in France and especially in Spain with torrential rains and torrents of mud have spread terror in the population by destroying everything, cities, roads and bridges. We must no longer hide our faces and say that water vapor is a natural phenomenon and does not influence the climate.

Decarbonizing human activities a little is necessary but is no longer enough, it is necessary to DEHYDRATE A LOT and it is much easier and above all, by far, the least expensive.

In the details and according to the readings on the NASA temperature curve (see graph below) we note: The reference period being 1951-1980, we can see that over 41 years from 1880 to 1921 the Southern Hemisphere is slightly less cold than the Northern Hemisphere, the coldest year being 1916 with a temperature difference of -0.6°C.

Then over 46 years from 1920 to 1966 we see the beginning of global warming in the Northern Hemisphere with a negative gap until 1930 and then the gap becomes slightly positive on average until 1966, the year of the end of Air Transport with propeller planes and the beginning of jet planes.

From 1967 to 1990, global warming began to be visible and the difference was between 0.2°C and 0.6°C, the hottest year being 1990. And in addition, we see that the Southern Hemisphere is slightly warmer than the Northern Hemisphere.

While the temperature difference in the Southern Hemisphere follows the same gentle and linear slope with a difference that goes from 0°C in 1970 to 0.6°C in 2022. This is a temperature increase of 0.1154°C every 10 years. Both hemispheres have the same carbon dioxide content, CO2. If this greenhouse gas were the only one responsible for Global Warming, the two hemispheres would

have on average, more or less, the same climate change as they had from 1880 to 1990 in the space of 110 years. We can thus deduce that Global Warming in the Southern Hemisphere is essentially of CO2 carbon dioxide origin.

On the other hand, from 1992, the temperature difference in the Northern Hemisphere spiralled from 0.2°C to 1.44°C in 31 years, i.e. an insane slope of 0.4°C every 10 years. Global warming in the Northern Hemisphere is currently accelerating by 3.5 times that of the Southern Hemisphere, which will give a temperature difference of between +5.25°C and +7°C in 2100. This is very far from the PNACC-3 (National Plan for Adaptation to Climate Change) and its 51 measures to adapt to +4°C. We have to face the facts, the other greenhouse gas solely responsible for runaway climate change is none other than the water vapor injected by man into the lower stratosphere.

It was the explosion of the HUNGA TONGA submarine volcano, which propelled 140 million tons of water vapor into the stratosphere of the southern hemisphere on January 15, 2022, that revealed this extremely violent climatic fact. In 2023, the southern hemisphere warmed by 0.23°C, 20 times more than its historical average.

The human activities generating CO2 through the use of fossil fuels coal, oil or gas are identical in both hemispheres, the only human activity that deposits water vapor, through the combustion of 300 millions tons of kerosene between 9 and 13 km altitude in the lower stratosphere, is Air Transport and the very significant proportion is **93% of flights in the Northern Hemisphere and only 7% of flights in the Southern Hemisphere.**

Every year in the Northern Hemisphere, the deposition of water vapor from high-altitude jet aircraft is more than twice that injected by the explosion of the HUNGA TONGA.

The only solution to make this water vapor neutral for the climate is to imperatively limit the cruising level of global air transport to less than 8000 meters from 40° north or south latitude to the Pole, and between 8,000 meters and 11,000 meters on the rest of the globe between '-40° AND +40° latitude.

It should be noted that Regional Air Transport, which uses turboprop aircraft of the ATR 42 or 72 type, whose ceiling is precisely 7600 meters, does not participate in the climate runaway and their emission of water vapor at low altitude is totally neutral, as for the cooling of nuclear power plants.

Other evidence of the dramatic influence of air transport water vapour on the climate has been identified.
During the covid 19 epidemic, from December 2019 to December 2021, global air transport was brought to a total standstill for three periods, from March 17 to May 11, 2020, from October 30 to December

15, 2020 and from April 3 to May 3, 2021, and NASA's temperature readings over the Arctic mark an average temperature drop of more than 2 degrees. Similarly, the Arctic ice extent surveys at the nsidc.org site show that this ice extent melted sharply from 2016 to 2020 and that since 2021 this ice extent has been reformed following the non-overflight of the Arctic Ocean by World Air Transport. It should be noted that with the war in Ukraine, flying over the Arctic Ocean is prohibited.

In Antarctica, in 2021, the ice extent remains within the average observed from 2011 to 2020. In 2022, following the explosion of the Hunga Tonga submarine volcano, we see an accelerated melting of the sea ice with a record low in 2023. In 2024, the amount of water vapor in the upper atmosphere is less because it is evacuated over time, the ice of the Antarctic ice pack is reforming.

On the readings of the state of the Alpine glaciers, which the University of Zurich provides on the Glamos.ch website , it can be seen, during the Covid 19 epidemic and the cessation of Air Transport, that since December 2019 the melting of the Alpine glaciers has been significantly reduced and above all that during the year 2020 the melting of the Alpine glaciers has practically stopped.

To close the hole in the ozone layer that scientists have observed since 1970 in the upper atmosphere, in 1987 twenty-four countries and the EEC signed the Montreal Protocol. The text prohibits the use of chlorofluorocarbon substances CFCs, used as refrigerants, solvents and as a propellant in sprays. Forty years later, all the countries of the world have ratified the agreement and the ozone layer that protects the planet is being rebuilt. We have a problem of the same type to solve.

We must be aware that the PNACC-3 is insufficient. From the moment the cause of the runaway climate is finally identified, it is imperative to lower the cruising level of planes below 8000 meters to save the Alpine glaciers, the poles and the high seas.

To do this, in Europe and the Middle East, to encompass the glaciers of the Alps and the Mediterranean Sea, which is rapidly overheating on a trend of +3° to +4°C, the national airline AIR FRANCE and its AIRLINE PILOTS must propose and set up an experimental laboratory as suggested by MIT to *limit the flight level to less than 8000 meters*. Zero water vapor in the stratosphere is thus possible in Europe from 2027 and then in the rest of the world, to achieve the objectives of sustainable aviation by 2030.

And moreover, we must keep reason and also limit the future growth of air transport between 1 and 2%, 4.5 billions passengers in 2019

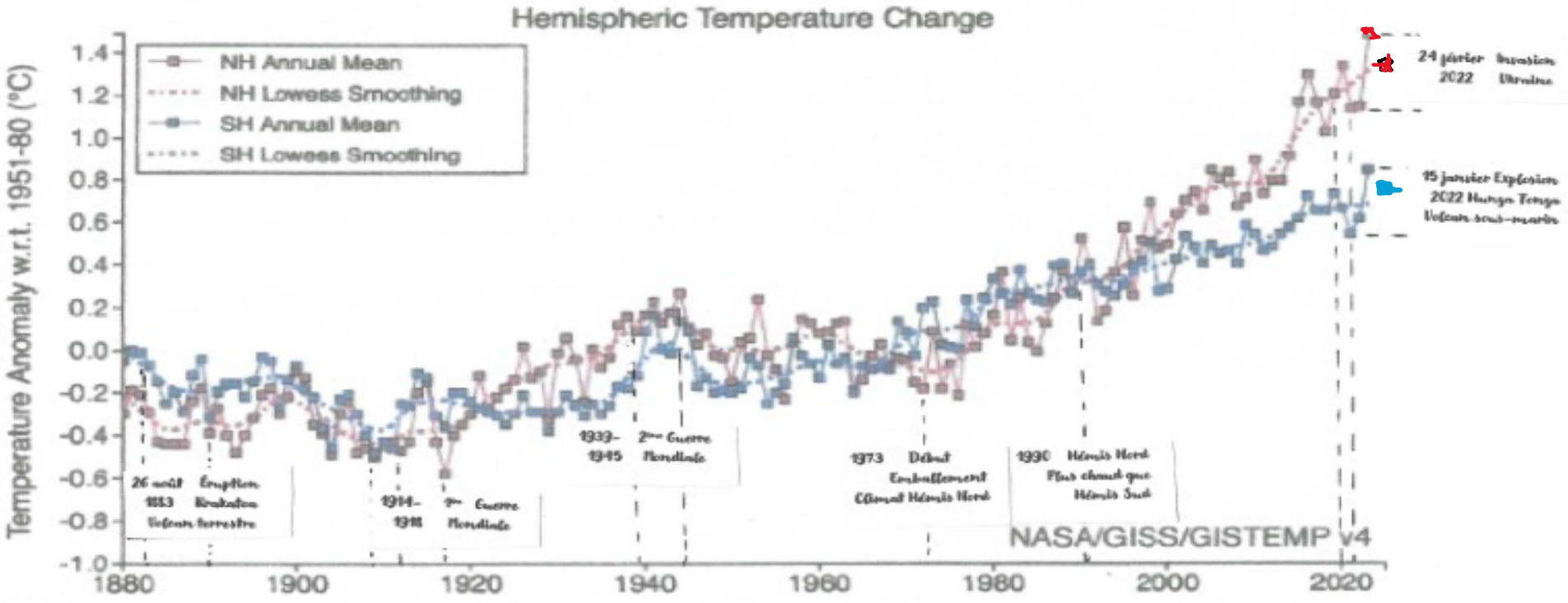
and a forecast of 9 billion in 2050 in 25 years, it is untenable for the planet.

And subsequently, by 2050, some of the countries listed in my study will have to implement this European unitary patent to fight against water vapour and residual global warming, to maintain the bearable temperature difference set in Paris by the COP 21 of 2015 between 1.5° and 2°C in 2100.

Hoping to have convinced people of the importance of the fight against stratospheric water vapour, we can continue to fly with our superb machines without shame and satisfy the desire to travel of our passengers.

Gino SCATOLIN, CDB AF retired

Patent https://www.piufortavi.com/ website



Annual and five-year lowess smooth anomalies (vs. 1951-1980) separately for the Northern and Southern Hemispheres based on land and ocean data.

Figure also available as a PNG, PDF, HTML, plain text and CSV (data columns 2, 3), or Generate PNG of the visualization's current state.

Global Monthly Mean Surface Temperature Change

Annual Mean Temperature Change in the United States

Seasonal Mean Temperature Change

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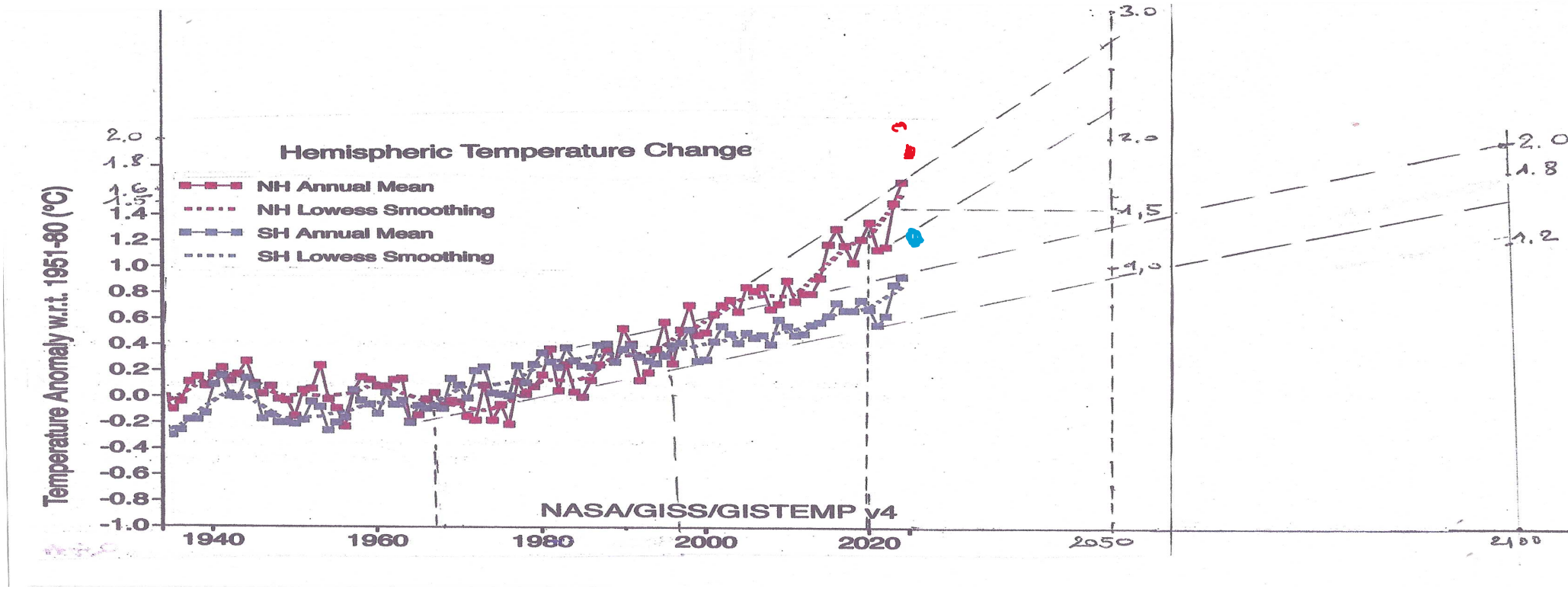
Temperatures of both the Northern and Southern Hemispheres, NASA archives



2050 and 2100 projections of temperatures in both hemispheres if we do not stop the runaway climate

Northern Hemisphere climate runaway from 2005 to 2025

Notes:

Since the annual low in 2020 of 10.150 million km2, the Arctic sea ice is recovering in 2021 given the halt in the deposition of water vapour produced by the non-overflight of the Arctic Ocean by the World Air Transport for the Far East following the covid 19 pandemic. But the outbreak of the war in Ukraine in February 2022 again increases the melting of the sea ice. In 2023 and 2024, its extent returns to its 2007 and 2012 value.

Arctic sea ice extent in MKm2

	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Seven	Octo	Novem	Decem		Year
2005	13.66	14.37	14.69	14.09	12.91	11.16	8.649	6.301	5.504	7.352	10.22	12.23		10.907
2006	13.47	14.33	14.42	13.91	12.52	10.92	8.46	6.496	5.862	7.541	9.659	11.96		10.773
2007	13.7	14.51	14.54	13.85	12.78	11.22	7.943	5.342	4.267	6.04	9.76	12.03		10.474
2008	13.89	14.95	15.18	14.35	12.97	11.21	8.678	5.913	4.687	7.35	10.34	12.36		10.978
2009	13.91	14.81	14.98	14.5	13.19	11.32	8.465	6.136	5.262	6.92	9.772	12.2		10.932
2010	13.74	14.58	15.14	14.66	12.87	10.59	8.075	5.875	4.865	6.984	9.614	11.83		10.711
2011	13.46	14.36	14.55	14.11	12.68	10.75	7.724	5.503	4.561	6.465	9.772	12.15		10.483
2012	13.73	14.55	15.2	14.63	13.01	10.67	7.672	4.723	3.566	5.886	9.388	12.01		10.406
2013	13.7	14.72	15.03	14.3	13	11.36	8.132	6.014	5.208	7.455	9.939	12.18		10.897
2014	13.65	14.42	14.76	14.09	12.7	11.03	8.108	6.078	5.22	7.232	10.12	12.35		10.79
2015	13.6	14.4	14.37	13.89	12.47	10.88	8.378	5.599	4.616	6.966	9.846	12.05		10.566
2016	13.46	14.2	14.4	13.68	11.92	10.41	7.938	5.371	4.528	6.082	8.658	11.46		10.163
2017	13.19	14.12	14.29	13.75	12.63	10.76	7.939	5.481	4.822	6.767	9.493	11.74		10.393
2018	13.08	13.97	14.3	13.7	12.23	10.78	8.268	5.615	4.785	6.134	9.823	11.86		10.355
2019	13.57	14.39	14.57	13.43	12.19	10.59	7.589	5.026	4.364	5.735	9.353	11.9		10.201
2020	13.64	14.64	14.73	13.62	12.34	10.59	7.294	5.07	4.001	5.334	8.985	11.73		10.15
2021	13.5	14.39	14.66	13.79	12.68	10.77	7.647	5.715	4.952	6.816	9.83	12.15		10.552
2022	13.87	14.61	14.59	13.99	12.88	10.88	8.287	5.95	4.897	6.657	9.725	11.89		10.661
2023	13.36	14.19	14.43	13.92	12.82	10.99	8.207	5.514	4.381	6.412	9.682	11.98		10.469
2024	13.92	14.61	14.87	14.04	12.74	10.85	7.87	5.13	4.351	5.934	9.146	11.41		10.391
2025	13.11	13.75	14.12	13.83	12.49	10.41	7.66	5.413	4.747	6.317	8.775	11.22		10.130
2026	13.11	14,098	14,131	13,568	12,14	10,422	7,714	5,561						

Antarctic Global Warming from 2005 to 2025-

Notes

Between 2005 and 2021, fluctuations around 11.5 million Km2 but since the explosion on 15/02/2022 of the underwater volcano HUNGA TONGA, there has been a sharp drop in this area of more than 1 million Km2 (-7.5% in 2022 and -15% in 2023) and a very marked warming of the southern hemisphere which is not linked to CO2 but to the 140 million tons of water vapor propelled into the stratosphere

Antarctic sea ice extent in MKm2

	Jan	Feb	March	Apr	May	June	Jul	August	Seven	Octo	Nove	Decé		Annual
2005	4.752	2.97	4.082	7.032	10.29	13.29	16.16	17.92	18.81	18.48	16.32	9.68		11.695
2006	4.164	2.651	3.215	6.01	9.456	13.35	16.11	18.1	19.09	18.73	16.23	9.854		11.461
2007	4.673	2.905	3.835	6.418	9.648	13.29	15.96	17.68	18.86	18.51	15.89	11.98		11.687
2008	6.414	3.895	5.284	8.242	11.05	14.06	16.1	17.65	18.15	17.99	16.25	11.51		12.239
2009	5.707	2.991	4.441	7.798	10.93	13.91	16.26	18.1	18.96	18.3	15.85	10.74		12.049
2010	4.958	3.106	3.847	6.715	10.64	14.41	16.92	18.61	18.8	18.65	16.76	11.27		12.107
2011	4.512	2.519	3.368	6.097	10.09	13.33	15.75	17.81	18.74	18.22	15.76	11.2		11.501
2012	5.654	3.553	4.55	7.309	10.46	13.55	16.3	18.1	19.21	18.59	16.11	10.39		12.004
2013	5.543	3.836	5.017	7.623	10.92	14.16	16.81	18.66	19.39	19.02	16.87	11.85		12.524
2014	6.327	3.843	4.901	8.343	11.52	14.69	17.11	18.91	19.76	19	16.39	11.93		12.776
2015	6.852	3.799	4.964	8.373	11.72	14.48	16.78	17.75	18.44	18.41	16.18	10.66		12.414
2016	4.689	2.79	4.069	7.222	10.1	13.24	16.02	17.89	18.15	17.46	14.22	8.279		11.202
2017	3.784	2.288	2.699	5.436	9.014	12.41	15.3	17.22	17.91	17.78	15.11	9.482		10.749
2018	4.211	2.326	3.54	6.033	9.321	12.89	15.7	17.42	17.96	17.73	15.1	9.188		11
2019	3.868	2.655	3.169	5.718	8.852	12.25	15.3	17.48	18.34	17.94	15	9.409		10.876
2020	4.598	2.92	4.003	6.662	9.871	13.28	15.72	17.76	18.84	18.49	16.23	10.58		11.602
2021	4.777	2.892	4.484	7.132	10.4	13.54	16.45	18.19	18.51	17.69	15.04	9.245		11.579
2022	3.935	2.213	2.859	5.948	9.418	12.22	14.99	17.05	18.06	17.47	15.16	8.839		10.726
2023	3.296	1.978	2.838	5.538	8.447	11.12	13.57	15.58	16.89	16.28	14.38	8.765		9.931
2024	4.047	2.187	3.221	6.253	9.363	11.85	14.2	16.41	17.15	16.65	14.31	9.593		10.461
2025	4.693	2.218	3.002	6.173	9.273	12.11	14.67	16.5	17.64	16.97	14.58	9.219		10.663
2026	4.492	2,912	3,568	6,178	9, 345	12,332	15,023	16,463						