

Everyone is talking about climate change. But how acute is it, and how momentous? Nine important facts – and what Volkswagen is doing to limit global warming.

More than ever, climate change is becoming the central political issue. These days, the coalition partners of the German government are negotiating a much-debated billion-euro package for more climate protection in Berlin. And on 21 September, the UN Climate Action Summit will start in New York, to which the Swedish climate activist Greta Thunberg specially travelled with a sailing yacht. At the same time, climate change is complex, contradictory and controversial. How acute is it, what are its consequences and who contributes to its emergence? We have collected nine key facts - and at the same time summarised the Volkswagen Group's sustainability activities for you:

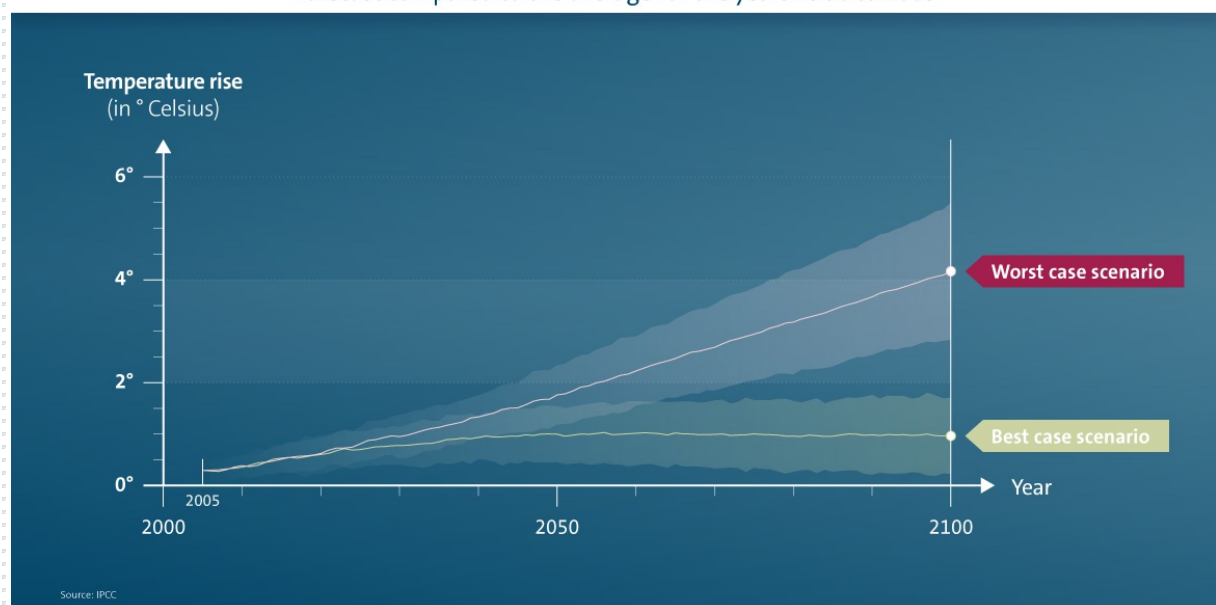
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1. If CO₂ emissions continue to rise worldwide, the earth will warm up by up to four degrees Celsius by 2100, according to calculations.

Source: [Special Report: Global Warming of 1.5 °C](#)

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GLOBAL TEMPERATURE CHANGES
Forecast compared to the average for the years 1986 to 2005



If it continues like this, it's going to get extremely hot

2. Heat record: June 2019 was the world's hottest month since temperature records began in 1880. In Europe, June was more than two degrees above the average.

Source: [Climate Change Service](#)

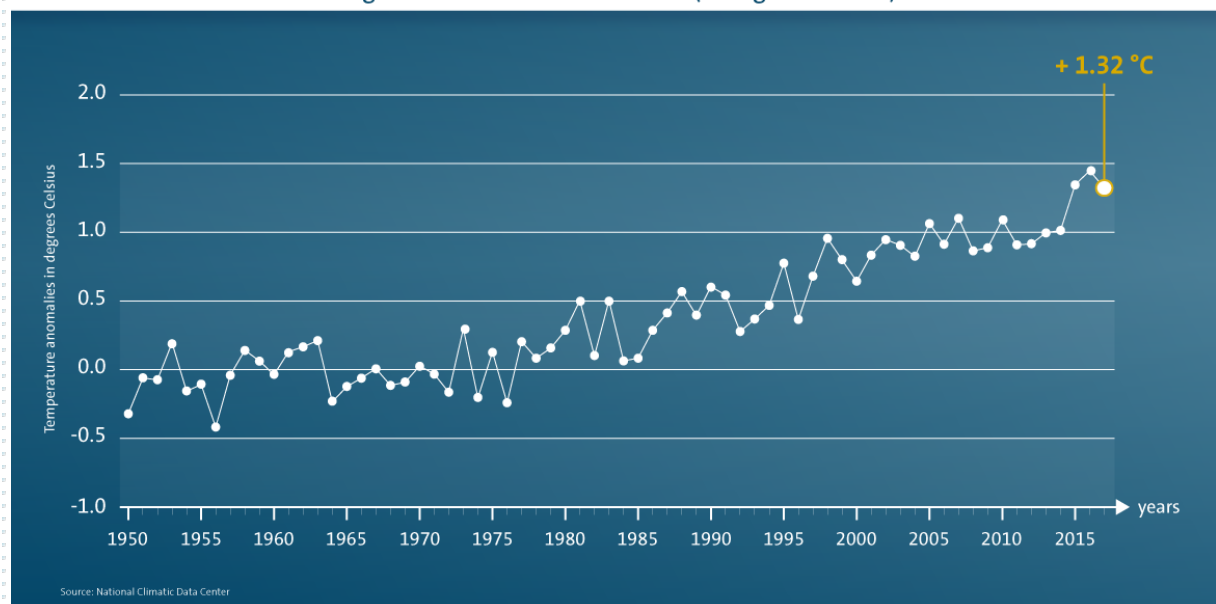
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3. It is increasingly getting warmer increasingly faster: since 1950, the average global temperature has risen by around 1.32 degrees Celsius. Since 1850 by around 1.53 degrees Celsius.

Source: [Special Report: Global Warming of 1.5 °C](#)

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RISE OF AVERAGE CONTINENTAL TEMPERATURES
At global level from 1950 to 2017 (in degrees Celsius)



Global warming is measurable; the danger of droughts and heat waves are rising

4. The realization is: 97 percent of the experts believe that climate change is man-made.

Source: [Quantifying the consensus on anthropogenic global warming in the scientific literature](#)

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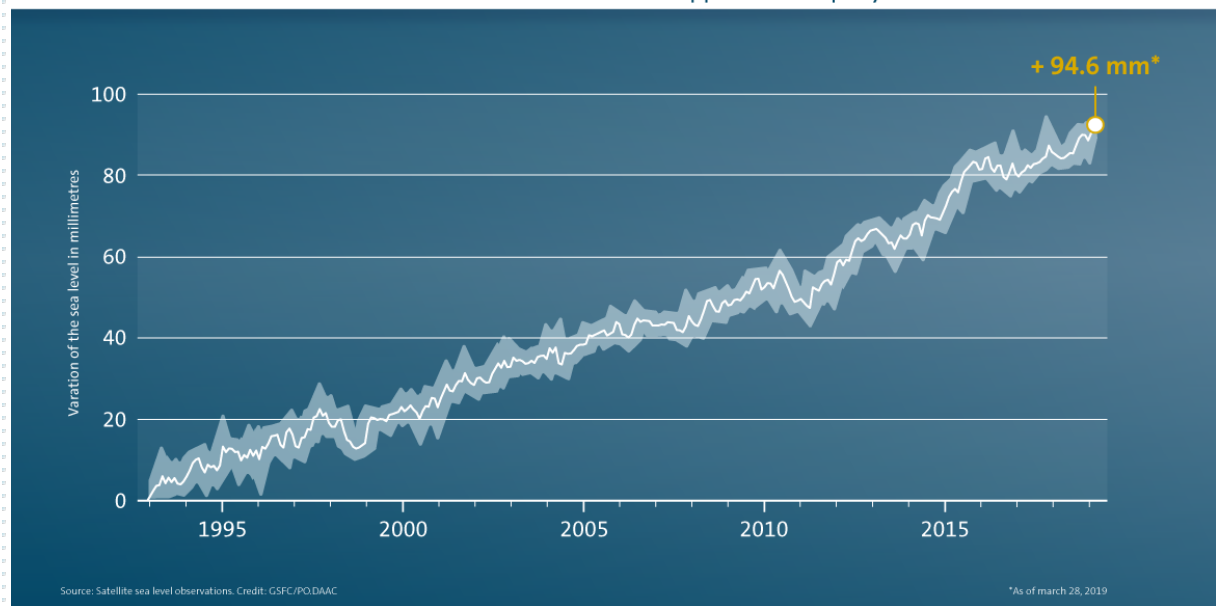
5. Danger to coasts and islands: sea levels have risen by almost ten centimeters in the past twenty years. But things are accelerating all the time: sea levels are currently rising by 3.3 millimeters a year.

Source: [NASA- Global Climate Change](#)

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THE SEA LEVEL IS RISING CONTINUOUSLY

Satellite data show an increase of approx. 3 mm per year



More sea: Sea levels are rising due to the ice at the poles melting.

6. By the year 2100, sea levels could be almost 2.40 meters higher.

Source: [Ice sheet contributions to future sea-level rise from structured expert judgment](#)

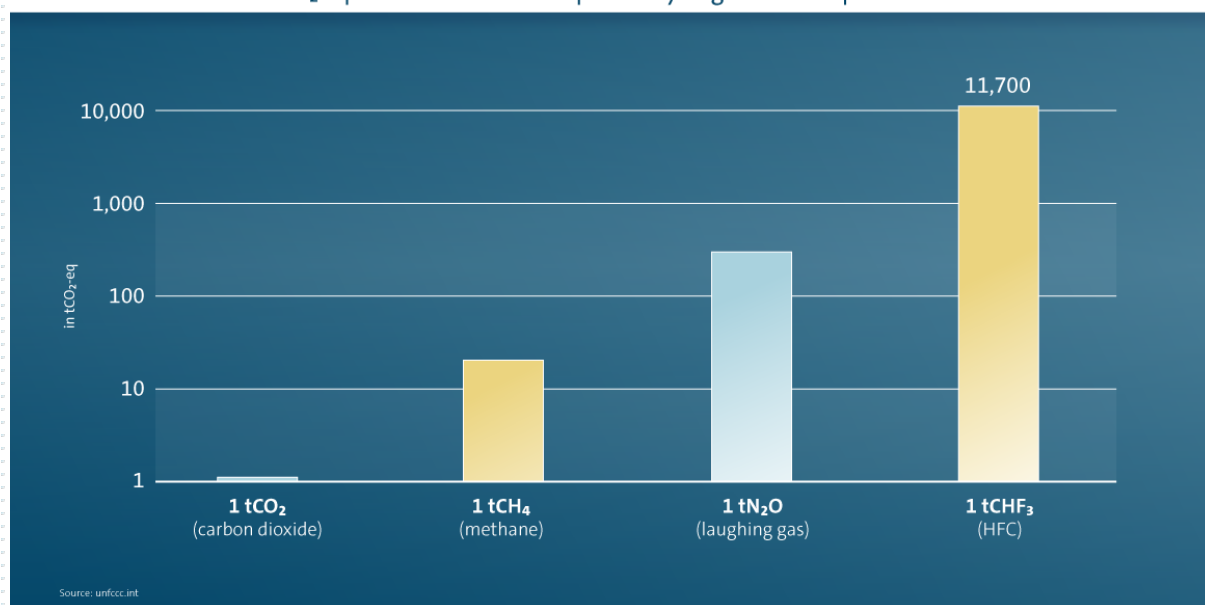
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7. It's not just CO₂: methane and nitrous oxide from agriculture as well as the coolant HFC have a stronger greenhouse effect over the same amount of CO₂.

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CO₂-eq: MORE THAN CARBON DIOXIDE

CO₂ equivalents enable comparability of greenhouse potentials



Comparison of greenhouse effect in tones of CO₂ from methane, nitrous oxide, HFCs and CO₂

8. Livestock farming and fertilization: Agriculture and forestry contribute about 23 percent of man-made greenhouse gases.

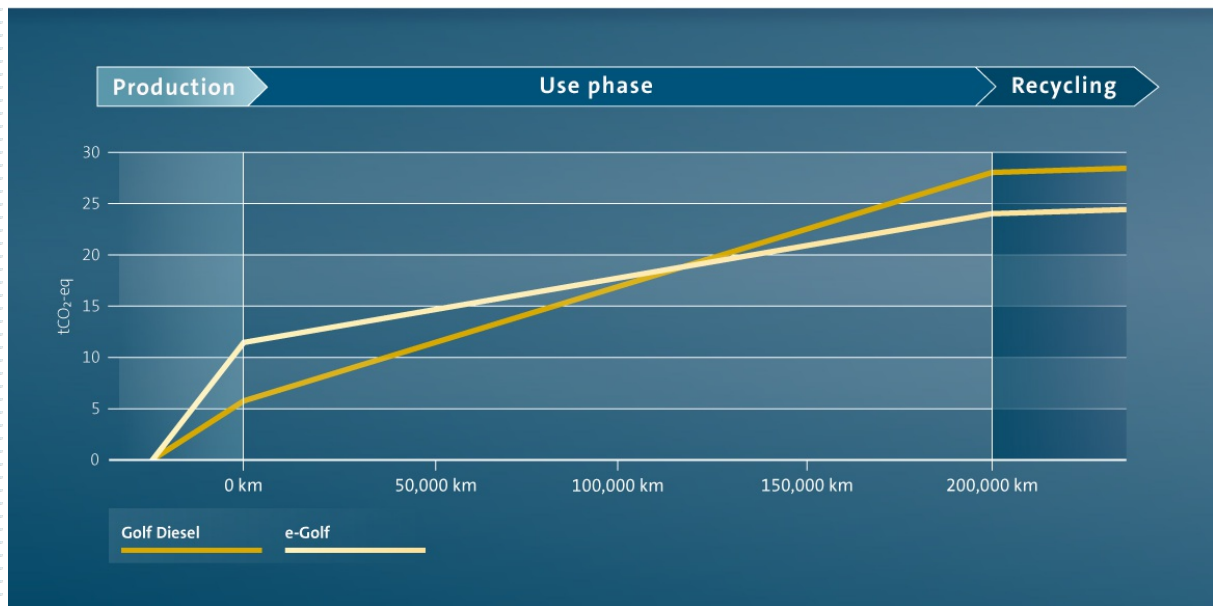
Source: [Special Report: Global Warming of 1.5 °C](#)

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9. E-Mobility: The longer an electric car is in use, the better its CO₂ balance per kilometer, measured at a European average.

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CLIMATE FOOTPRINT: E-GOLF VERSUS GOLF DIESEL



After a longer period of use, an electric car is more climate-friendly.

What the Volkswagen Group is doing

Volkswagen works essentially in two areas to reduce CO₂ emissions: On the one hand, the company is beginning with full-scale, mass market production of e-mobility vehicles, for the first time. With the launch of the ID. family, the Group will be the first manufacturer to offer a wide range of all-electric compact, small and luxury vehicles to a broad market. At the same time, the Group continues to optimize its petrol and diesel engines, as well as developing numerous hybrid models.

In detail:

- By 2023, the Volkswagen Group will be investing around 30 billion euros in electric mobility, launching around 70 new electric vehicles on the market – including numerous models based on the new Modular Electric Drive Kit (MEB). With the CO₂ target of 95 grams by 2020/21, the Group is well on its way to achieving its ambitious target - and is making considerable efforts to achieve that. Source: *Volkswagen Group*
- Newly registered passenger cars from Volkswagen Group now consume 25 per cent less fuel than in 2007. Source: *Volkswagen Group*
- According to official data from the German Motor Vehicle Federation (KBA), last year Volkswagen was the largest manufacturer of new pure electric car registrations in Germany. In 2018, 6,799 fully electric Volkswagen passenger vehicles were registered in Germany, out of a total of 36,062 pure-electric passenger cars. This means that Volkswagen accounted for 18.9 per cent of this future segment. Source: *German Motor Vehicle Federation (KBA)*
- Over the past 15 years, the Volkswagen Group has reduced pollutant emissions from diesel and petrol engines by 84 per cent 60 per cent, respectively.
- The CO₂ balance of the diesel engine is 15 per cent lower than that of other combustion engines. Comparable fuel savings in hybrid vehicles can only be achieved with much greater technical effort.
- The latest generation of diesel engines (EA288 evo) from the Volkswagen Group have even lower emission

levels and reduce consumption and CO₂ emissions by a further 10 percent. Source: *Volkswagen Group*

But it is not only low-consumption engines and all-electric models that serve the goal of saving CO₂. It is just as important for the Volkswagen Group to conserve resources at the production stage. For this reason, the company also uses sustainable materials everywhere, such as renewable raw materials. The aim is to reduce CO₂ emissions over the entire value chain and lifecycle.

With the ID.3¹, Volkswagen offers the world's first balance-sheet-neutral CO₂-neutral electric car. This is possible because both the production of the battery cells and the vehicle production function with 100 percent green electricity. Volkswagen offsets unavoidable emissions with climate protection projects. During the use phase, it is up to the customer to also use green electricity for charging - Volkswagen makes suitable offers via its subsidiary Elli ("Electric Life"). To mark the launch of ID.3, the brand is also launching the matching wallbox on the market: the ID. Chargers will be able to load their electric cars quickly and conveniently at home in the future.

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Fuel consumption

¹ ID.3 - The vehicle is not yet for sale in Europe.

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Information in accordance with directive 1999/94/EC as amended: further information on the official fuel consumption and the official specific CO₂ emissions of new cars can be found in the 'Guide on the fuel economy, CO₂ emissions and power consumption of all new passenger car models' available free of charge at all points of sale in Germany and from DAT Deutsche Automobil Treuhand GmbH, Hellmuth-Hirth-Strasse 1, D-73760 Ostfildern, Germany or at www.dat.de.

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