

Climate Change: Effects of Motorsport

By Finn Mahon

Most signs show that motorsport is detrimental to the environment. For this reason, motorsport fans must ask themselves one simple question. Why are the people in power not doing more to find the perfect solution to this enormous problem?

According to CleanTechnica, a single team could travel over 109,000 air miles over the 21-race calendar where all ten teams would be burning approximately 147 million pounds of carbon dioxide, just to showcase the sport around the globe. That's the same amount of emissions that come from charging over 8 billion smartphones. Transportation is one of the biggest contributors to climate change and it's estimated that 7 billion tons of carbon dioxide (CO₂) was produced in 2020 alone, from global mobility.

In motorsport, they use lots of different fossil fuels like CO₂ emissions. Emissions per km in these vehicles are nine times those of an average new car. One of the main auto racing companies in the world, NASCAR, has informed the public that they see one million miles of racing at five miles per gallon each year. These numbers are catastrophic. Something has got to change. That's where Sylvain Filippi comes in.

Filippi is the managing director of Envision Racing, a British motor racing team based at Silverstone, where the F1 Grand Prix is held every year. He has publicly said that he holds the desire for all cars to become 100% sustainably fuelled, hybrid engines, "In 2025, our aim is to unveil the new Formula 1 engine and it will be a 100% sustainably fuelled hybrid engine that will be carbon neutral but maintain the power and speed we expect". He clearly sees this problematic issue and a decrease in carbon emissions can only be seen as a positive to make this sport greater than it ever was and is, "We aim to make a drop in fuel and are in advanced discussions with fuel companies to create the volumes needed for the sport but also scaling up the wider social use". Filippi is a prime example of someone who evidently knows what is vitally needed to achieve a more sustainable atmosphere.

Seven-time world champion in F1, Lewis Hamilton, is also a part of this new and improved model as he looks to create a better engine for his car. He believes the environment must change sooner rather than later. Sebastien Vettel, also multiple time world champion, is in strong agreement with Hamilton. He would like to see F1's resources and data used to put the sport to the very top to develop a more environmentally friendly world. The F1 itself is looking to improve, as by 2030 their goal is to have a net zero carbon footprint. 250,000 tons of carbon per year is simply unacceptable.

Last year, F1 introduced the use of 10% sustainable fuel which is a good starting point. F1 have confirmed that only 0.7% of the carbon emission from an entire season come from the cars however, the wider suggestions are what matter.

Managing Director of F1, Ross Brawn believes, "Engineers of an F1 team are very selfish, they don't waste an ounce of energy on anything other than making a car go faster and if they set a challenge wrapped around this sustainable fuel objective, they will 100% put every effort into it because it will give them the edge." Brawn could be on to something here as rewarding teams that are more environmentally friendly would benefit all parties.

One approach to sustainably fuelling, existing internal combustion engine cars is through the use of biofuels, which are made from renewable sources like plants and algae. Another option is to retrofit these vehicles with hybrid or electric powertrains, although this can be costly and may be practical for all types of vehicles. Additionally, efforts can be made to improve efficiency of existing vehicles through measures such as better engine design and the use of lighter material. With over 1.3 billion cars with internal combustion engines, it will be hard to do so as their replacement and neutralising will take many years.

Ex Formula One Technical Director, Paddy Lowe is working on a Zero Petroleum project which will become difficult but definitely possible to achieve. He knows that it "Simply isn't feasible to move away from petroleum", so the question is how do we make it synthetically? It will not only benefit the 1.3 billion existing road cars using an internal combustion engine as it will provide solutions where electrical infrastructure is also a problem making universal conversion to EV's a reasonable aim.

I believe that although the people higher up are making improvements to the use of carbon emissions in motorsport, there is still a lot more that can be done. With the right measures put in place, it will make the sport more enjoyable once again. Maximising racing teams annual budgets and use of carbon on their cars, would help massively with this as they wouldn't be allowed to use outrageous vehicles. There would be a fairer playing field and our society would benefit hugely.

Things must change urgently or before we know it, we could see astronomical effects to our globe, without us even realising it until it's too late. They must act now. We must act now.