

Making a difference to

The changing environment

As the debate on the cause and impact of climate change continues, what is clear is that businesses must act now to do more with fewer of the planet's precious resources, and with less negative environmental and social impact.

In a fragile world we must be part of the solution

The continuing accumulation of greenhouse gases is described as the main cause of global warming, with the predicted result that sea levels will rise by at least 30cm by the end of the century, along with more frequent extreme weather. Both affect food and water supply just when the growing global population needs it most, bringing increased international pressure to restrict climate change.

This, along with ever more scarce natural resources, means a growing demand for innovative sustainable products produced using fewer and more effective ingredients, from bio-based raw materials, made using more environmentally and socially sensitive processes.

Our opportunities to make a difference

From our unique position focused on using bio-based raw materials, rather than petrochemical, we have a real opportunity to contribute directly to the targets supporting the United Nations Sustainable Development Goals (SDGs) as our ingredients are used in a wide variety of consumer products.

In our businesses, there are many examples of our ingredients bringing about major reductions in greenhouse gas emissions when included in customers' formulations; for example, in engine lubricants where one tonne of our Perfad™ friction modifier saves over 1,700Te of CO₂ emissions. In application, our Life Sciences products make a real difference to the lives of farmers in developing nations, addressing food

supply and local economic development, and our drug excipients and newly acquired vaccine adjuvants business, Biosector, also directly address the SDGs for prevention of disease.

Reaching wider than our own products and operations, we are taking the opportunity to inform and shape future policy on climate change with our voice on industry committees. Being open and transparent, we also work to minimise environmental and social impact along our entire supply chains and report our performance publicly.

Croda Performance Technologies Maximising positive impact

We are committed to minimising any negative environmental impact of our operations, but increasingly important are the positive impacts of our ingredients in customer applications.

Coupling performance advantages with increased bio-based content, our Home Care ingredients deliver sustainability and sensory effects across the whole value chain, from polymer fibre to end garment, at the same time reducing water and energy consumption in production. For example, our Coltide™ surfactants extend the lifetime of garments by keeping them looking newer for longer.

Croda Energy Technologies lead the way in lubricant fluids and in 2018 launched the new range of Perfad™ friction modifiers that enhance engine durability, fuel economy and emission reduction. The business is also investing in phase change materials. These can be used, for instance, in temperature-controlled packaging and to store thermal energy, thereby saving energy and fuel in internal combustion engines, hybrid and electric vehicles, as well as to store heat generated by day in homes for use at night.

In Smart Materials, our environmentally friendly and durable Maxemul™ coating solutions are VOC free, reducing our carbon footprint. We also offer anti-scratch solutions to reduce the repair and replacement needs of high performance plastic components, reducing the use of scarce resources.

Minimising negative impact

Through a number of investments at our manufacturing sites, we have reduced our environmental impact. For example, our Performance Technologies sector benefits from the bio-fermentation plant at our Gouda manufacturing site in the Netherlands, which has reduced its external energy dependency by 25%. Our Chocques site in France uses energy from the city incinerator, and in Hull in the UK, our £27m capital expansion project is re-using 95% of building demolition materials to save energy, keep waste out of landfill and reduce greenhouse gas emissions.

In addition, we have invested in a pipeline that enables us to use landfill gases at our Atlas Point manufacturing site. This site also uses solar energy, as we do at our Edison offices in North America and our Thane site in India.