

SUSTAINABILITY FOCUS AREAS

Challenges and Evonik's answers



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CHALLENGES AND EVONIK'S ANSWERS

This section provides information on the four Sustainability Focus Areas (SFAs), where we bundle our contributions to a sustainable transformation. For each SFA, we show how Evonik reduces its own ecological footprint as well as the handprint resulting from the use of our products and solutions in the relevant markets.¹

¹ This special section was outside the scope of the auditor's limited assurance engagement.



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CHALLENGE: FIGHT CLIMATE CHANGE

Voices of the younger generation



Sajid Chowdhury
Lab Technician RD&I
High Performance Polymers
Smart Materials
Location: Marl (Germany)

“ Personally, I take climate change very seriously, as I want future generations to have a good life on this beautiful planet. I don't want to repeat the ignorance of my ancestors. The challenge of reducing the rate of climate change is immense.

Making just a few changes is not enough. We need to

develop a lot of sustainable ways to live. That includes changing processes, new technologies, and innovative inventions. But also changes in our day-to-day life.

I use public transportation to travel instead of a car as much as possible, especially to travel to work. However, few of my friends and colleagues, not a lot of them, do this, even though they don't really live very far from work.

It's high time we all started to come up with new ideas to save what we can. **The idea of a new, renewable and greener way of running motors with hydrogen is something that really amazes me,** and I really look forward to it being implemented on the streets, not only in private cars but also in public transportation. That would be a huge leap towards helping the cause.

In 20-30 years, I'd like to be living in a better world where we have successfully prevented climate change and achieved a new balance between ecology and the economy. **It would be great if we had all integrated climate change successfully into our daily lives.** ”



Yuko Kobayashi
Applied Technology
Silica
Smart Materials Silica
Location: Yokkaichi (Japan)

“ I find the speed of climate change very worrying. Its influence is generally greater than we can envision, and there are no measures that are immediately effective. According to the experts, reducing greenhouse gas emissions is the primary countermeasure. However, that cannot be achieved overnight:

it takes time. Besides, sufficient renewable energy is not yet available for our modern lifestyle.

Somehow, we have to survive for a certain period and learn how to deal with climate disasters and natural catastrophes.

Above all, we need to reduce resource consumption quickly. Our affluent society is based on mass-production and mass-consumption. That means there are lots of things we can reduce or do without. If we desperately cling to our current lifestyle, the effects of our environmental measures will be limited. We have to change how we think and ask ourselves what is really necessary for our lives.

Climate change will bring many uncertainties in the decades ahead. I think the impact on people will increase. However, different countries are responding differently. **In my view, it would be desirable for everyone to recognize how serious the situation is and to tackle the problem together.** Multilateral cooperation is very important for that. ”



CLIMATE CHANGE

According to our stakeholders, climate change is one of the three most important sustainability issues for Evonik. You can find more on this in our sustainability report.¹



¹ See Sustainability Report 2021 p.25.

WHAT IS EVONIK DOING TO FIGHT CLIMATE CHANGE?

Examples of how we are contributing to the transformation

Handprint



- Evonik products that help customers avoid CO₂ emissions
- Transformative innovations that enable progress towards climate-neutrality

Footprint



- Defossilization of the supply chain
- Reduction in scope 1, 2, and 3 emissions
- Use of renewable energies
- Reduction in absolute and specific energy consumption



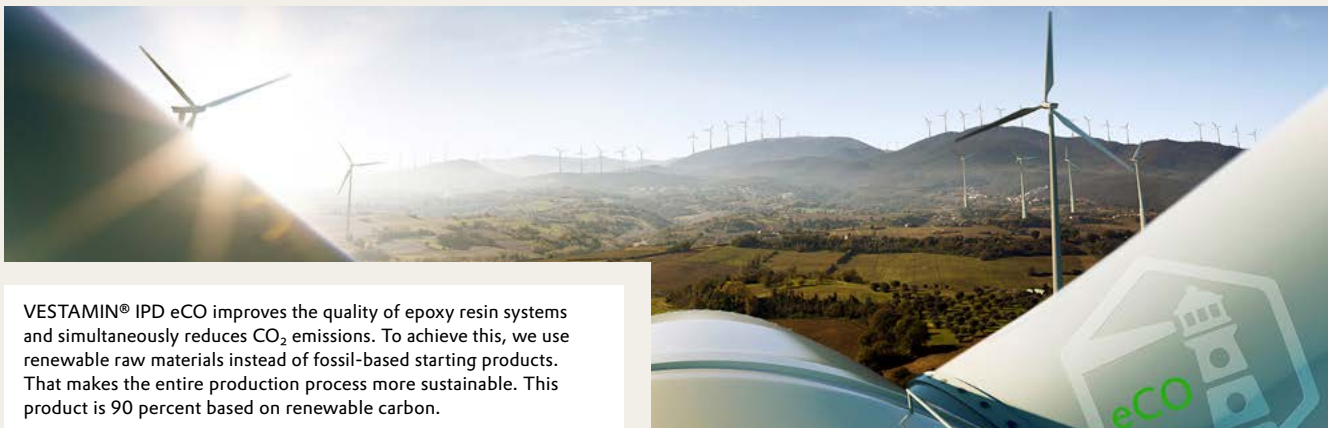
Lisa-Marie Bischer
 Consultant
 Life Cycle Management
 Technology & Infrastructure
 Location: Hanau (Germany)

“ Evonik has ambitious climate targets for scope 1, 2, and 3 emissions. In our team, we perform life cycle, value chain, and site analyses and technology assessments. We help Evonik achieve its targets because what has been measured can be managed. ”



Jürgen Leitermann
 Product Manager Digital Energy
 Management Systems
 Energy & Utilities
 Technology & Infrastructure
 Location: Hanau (Germany)

“ We are reducing manual work by digitalizing energy management. By 2026, more than 60 locations will be connected to this system linked, and over 90 percent of Evonik’s energy consumption will be registered digitally. Real-time monitoring of our CO₂ emissions and other key indicators is also possible. ”



VESTAMIN® IPD eCO improves the quality of epoxy resin systems and simultaneously reduces CO₂ emissions. To achieve this, we use renewable raw materials instead of fossil-based starting products. That makes the entire production process more sustainable. This product is 90 percent based on renewable carbon.

Our contribution

- Products and solutions for wind farms
- Membranes for the efficient treatment of biogas and the production of green hydrogen
- Additives for energy-efficient manufacturing processes
- Innovative high-tech insulating materials



We define our handprint as the positive effects generated by our products along the supply chain compared with other established products and applications, especially in customers’ applications.

CHALLENGE: DRIVE CIRCULARITY

Voices of the younger generation

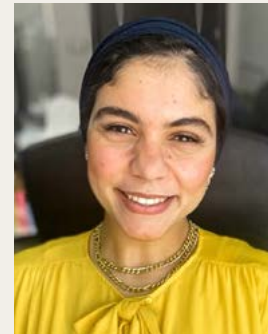


Matthew Wolbert
Technical Product Specialist
Care Solutions
Nutrition & Care
Location: Richmond (Virginia, USA)

“ Reaching the goal of a “circular economy” is something we all must strive for, especially within companies and politics. We, as consumers, have begun vocalizing our support for sustainability in the hope that this becomes a central market tenet. To fully effectuate this, I believe we need change at the regulatory level to protect the environment.

To meet this challenge, consumers should try to use products smarter. **As a personal example, I have opted to seek out used furniture as opposed to buying new.** Manufacturers also need to respond to consumers with a greater array of sustainable products and by publishing their environmental KPIs. With these offerings, consumers are allowed greater transparency to make the most informed decision possible with respect to which companies and products they support.

For future generations, product development should prioritize social and environmental benefits. Product life cycles should be designed for longevity, waste reduction, and environmental preservation. The longer we can keep individual items in circulation, the fewer input resources must be spent, and less total waste is created. ”



Soumaia El-Gamel
Jr. Technical Service Manager
Animal Nutrition
Nutrition & Care
Location: Cairo (Egypt)

“ A circular economy is basically saving the environment in many ways and therefore has a positive influence on social, economic and health aspects. **I live in Egypt, which is a developing country, so there is little chance of finding eco-friendly products such as food, skincare or clothes.** However, the educated

younger generation tries to think out of the box. For example, they form local communities to upcycle clothes, organize carpooling, and reuse packaging in creative ways.

I think producers should focus more on creating sustainable products that are affordable. Then consumers could make more responsible decisions.

I would like to see greater awareness of the consequences of how we act—not just the negative effects but also the positive ones. For example, by reducing poverty and unemployment and improving the quality of life. However, economic, social, and technological progress needs to be in harmony with nature. Therefore, I believe it is important to focus more on a circular economy with the participation of all countries and all people. ”



CIRCULAR ECONOMY

According to our stakeholders, efficient use of scarce resources/ circular economy is one of the three most important sustainability issues for Evonik.¹



¹ See Sustainability Report 2021 p.25.

WHAT IS EVONIK DOING TO DRIVE CIRCULARITY?

Examples of how we are contributing to the transformation

Handprint



- Enabling circular solutions in a wide range of end-markets
- Driving forward circular plastics throughout the value chain
- Reducing food waste

Footprint



- Use of renewable and circular raw materials



Dr. Phillip James
Technology Director
Interface & Performance
Specialty Additives
Location: UK

“ In a diverse team, we are bringing together technologies that will enable new recycling methods to succeed. My role is to develop process additives that will make chemical recycling processes run smoother and improve the compatibility of the recycled building blocks with the existing value chain. ”



Kathrin Lehmann
Technical Director Polymer Specialties
Interface & Performance
Specialty Additives
Location: Essen (Germany)

“ Contamination makes it difficult to recycle plastic bottles and results in downcycling. With additives developed by Evonik, plastic bottles can be recycled repeatedly without any loss of quality and used to produce new bottles. That increases the recycling rate. ”



VESTENAMER® from Evonik: a sustainable solution for circularity in the rubber industry. This process additive enables efficient recycling of rubber to obtain robust materials.

Our contribution

- Global circular plastics program: additives and technologies for mechanical and chemical recycling
- Development of innovative business models aligned with the requirements of the circular economy
- Use of renewable and circular materials



CHALLENGE: SAFEGUARD ECOSYSTEMS

Voices of the younger generation



Shao Wen Ng
Lab Technician RD&I
High Performance Polymers
Smart Materials
Location: Asia Research Hub (Singapore)

“ As a society, we have been striving towards fast progress and economic growth, but that has put too much pressure on our ecosystems. **I feel that the imbalance between growth and conservation is one of today’s main challenges,** and it’s exacerbated by the exploitation of natural resources for short-term profit.

We should change our mindset to actively safeguard our ecosystems and recalibrate our goals towards sustainability. As well as personal green choices, we need breakthroughs in research and development.

Ideally, in the future we should only consume food from sustainable sources. Sustainable mobility is also needed: New technologies should offer greener ways to travel and transport goods, thus lowering our carbon footprint. **For example, using augmented reality to connect people, and sending digital 3D models of required products to be printed on site, instead of transporting the actual items.**

Most of all, I hope people can learn as quickly as possible to act responsibly and embrace sustainable living, so our future generations can also enjoy the beauty of our planet. ”



Livia Minami
Marketing Analyst
Care Solutions
Nutrition & Care
Location: São Paulo (Brazil)

“ Biodiversity is the key to the survival of Earth’s ecosystems. **We are all connected, and taking care of the Earth should be part of our purpose in life. In the past, humans have frequently interfered with nature.** The destruction of natural habitats, intensive agriculture and forestry, and overfishing have resulted in a threat to species and ecosystems around the world. We need to be aware that each of us, including all plants and animals, play a role in maintaining the natural balance and self-regulation of the ecosystems.

Therefore, I make a personal contribution to the challenge of safeguarding our ecosystems. **As a consumer of beauty products, I buy cruelty-free products and biodegradable formulations.** Moreover, on social media, I follow NGOs and companies that work to safeguard ecosystems. I also share topics to encourage lively dialogue on this. Last but not least, in my daily life, my motto is: reduce, reuse, recycle.

I believe that small steps can make the difference, not only in Brazil but worldwide. **How amazing it would be in twenty years to find a world where biodiversity is restored.** ”



BIODIVERSITY

According to our stakeholders, biodiversity is a material sustainability issue for Evonik.¹



¹ See Sustainability Report 2021 p.25.

WHAT IS EVONIK DOING TO SAFEGUARD ECOSYSTEMS?

Examples of how we are contributing to the transformation

Handprint



- Reducing emissions into water and air; responsible water and waste management
- Careful use of freshwater in industry and agriculture
- Enabling resource- and nutrient-efficient livestock farming and aquaculture

Footprint



- Sustainable procurement of oleochemicals and other bio-based raw materials
- Lower water intake at production sites in areas subject to water stress



Faazi Adam
Director Sustainability
Animal Nutrition
Nutrition & Care
Location: Hanau (Germany)

“ The world’s population will grow to around 10 billion people by 2050. Therefore, efficient, resource-saving food production is important. We are contributing to that through scientifically based solutions like precision livestock farming, which can greatly reduce the use of arable land. ”



Peter Becker
Senior Manager Sustainability
Care Solutions
Nutrition & Care
Location: Essen (Germany)

“ We are systematically developing our portfolio towards circularity. Products based on renewable raw materials, innovative processes, and complete biodegradability after use are the preconditions for the markets of the future. ”



Special microbes strengthen plants during germination and protect them from stress. Evonik develops solutions that enhance the storage stability and effectiveness of such microbes.

Our contribution

- Global water management system
- Products for the sustainable nutrition of livestock
- Products and solutions for aquaculture
- Formulations for anti-fouling marine coatings
- Use of RSPO-certified palm oil, palm kernel oil, and their derivatives



CHALLENGE: ENSURE HEALTH & WELLBEING

Voices of the younger generation



Zenani Shozi
Lab Technician
Animal Nutrition
Nutrition & Care
Location: Midrand (South Africa)

“ Health and wellbeing can be defined in many ways, but I personally see it as my ability to be mentally, physically, and socially sane. **For me, health and wellbeing are the basis for a sustainable life.** ”

The global pandemic has shown us all how important health is and the far-reaching consequences of a disaster like this. Many people have died or are suffering long-term effects. Others lost their jobs; livelihoods were at stake.

A healthy environment and minimum social standards are huge factors in people's health and wellbeing. There should be widespread state intervention to ensure access to clean water and proper sanitation programs. That is vital for our society to move forward sustainably.

Every one of us also needs to take ownership. **Access to education and health care are the keys to a better world.** ”



Julia Hofmann
Assistant
Silica
Smart Materials
Location: Hanau (Germany)

“ **For me, health is the most important thing in life.** Here in Germany, we're fortunate that we have a very good health care system. Preventive health care is widespread, and that makes it easy for people to take advantage of it—as I do. However, I have to say that sometimes I find it hard to motivate myself to exercise and eat healthily. ”

I think a good work-life balance is becoming more and more important. The basis should be greater personal responsibility. For me, having the flexibility to decide when I work is especially important. **The boundaries between work and private life will inevitably become more blurred.** Working when and where it suits us will probably become the norm.


Mindfulness and an awareness of our bodies and every step we take are very important. **That includes a responsible attitude to the environment,** for example, cycling or walking if we're going only a short distance. And for travel within Germany, there are now good rail connections as an alternative to driving. ”



HEALTH PROTECTION/PROMOTION

According to our stakeholders, health protection/promotion are material sustainability issues for Evonik.¹



¹ See Sustainability Report 2021  p.25.

WHAT IS EVONIK DOING TO ENSURE HEALTH & WELLBEING?

Examples of how we are contributing to the transformation

Handprint



- Reducing volatile organic compounds and emissions of microplastics
- Enabling effective health promotion
- Hygiene and water treatment

Footprint



- Reduction in hazardous emissions
- Reduction in hazardous waste



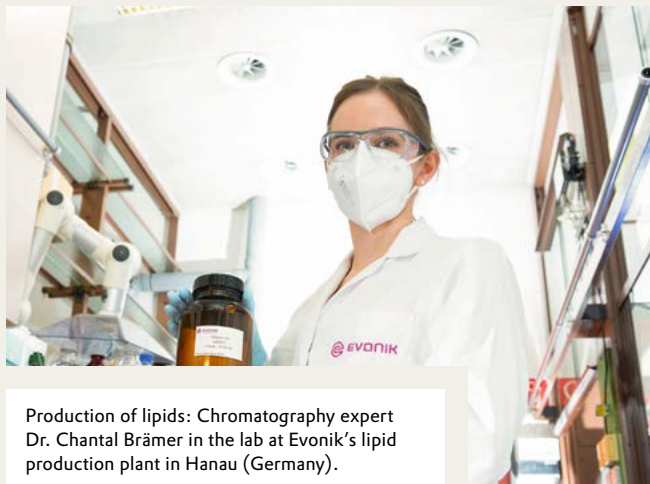
Ranjan Fletcher
Manager Sustainability Development
Health Care
Nutrition & Care
Location: Darmstadt (Germany)

“ We are analyzing our entire product portfolio to establish the sustainability impact of our products. However, we cannot do that on our own—working in collaboration with our suppliers and customers is the key to a more sustainable future. ”



Dr. Achim Fischer
Senior Project Manager RD&I
Health Care
Nutrition & Care
Location: Darmstadt (Germany)

“ Our healthcare products help improve people’s health and quality of life. For example, our lipid nanoparticles protect the mRNA vaccine and transport it safely to the cells. That optimizes the effect of the vaccine. ”



Production of lipids: Chromatography expert Dr. Chantal Brämer in the lab at Evonik’s lipid production plant in Hanau (Germany).

Our contribution

- Chemicals management system (CMS) for (hazardous) substances placed on the market (CMS^{PLUS})
- Products and solutions that reduce the VOC¹ content of paints
- More effective active ingredients for pharmaceuticals with fewer side effects and better acceptance by patients
- Lipid nanoparticles for innovative vaccines
- Products and solutions that help to enhance the quality of food and reduce surplus feed
- Waste management; reduction in other emissions into the air



¹ VOC = volatile organic compounds.

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