



Federal Ministry
of Food
and Agriculture

Responsibility for Sustainable Development

Strategies for Food, Agriculture and Rural Areas







Dear Readers

The principle of sustainability was established more than 300 years ago. In 1713, faced with a looming crisis in raw materials, the Saxonian mine administrator Hans Carl von Carlowitz was the first person to formulate the concept that only as much wood should be felled as could be regrown by planned reforestation, by means of sowing and planting.

This principle dating back hundreds of years is still as valid today and is an integral part of our political actions. The Federal Government has, therefore, indicated its very specific support for the implementation of the United Nations' 2030 Agenda and, by extension, for the promotion of sustainable development as the yardstick of government actions. Our German Sustainability Strategy is actively contributing to this. We are continuously and ambitiously carrying it forward and aligning it with the latest requirements.

Our Ministry, the Federal Ministry of Food and Agriculture, is giving its support in various ways to fleshing out the sustainability goals at both the national and international level. After all, in future we will have to produce more food with fewer resources. We can make even better use of renewable resources and design existing practices in a more sustainable way – from the agricultural sector to the fishing industry and forest management.

Please allow me to put this in an even more vivid form. For me, sustainability means, above all, that our actions are fit for our grandchildren. Particularly in the agri-food industry, this aspiration is worth a great deal because farms are frequently run by the great-grandchildren of their founders, i.e. by the fourth or fifth generation. In this industry, people don't think in calendar quarters: resources must be used and protected to ensure that future generations can manage their farms sustainably, too.

I wish you an interesting read.

Julia Klöckner

Federal Minister of Food and Agriculture

Joint goals for sustainable development

With its 2030 Agenda, the United Nations has presented a global action framework for sustainable development. The 17 Sustainable Development Goals for 2030, with a total of 169 sub-goals, are the cornerstone of the Agenda. The German Sustainability Strategy is informed by the 2030 Agenda and supplements its goals. It sets out the framework for actions that affect Germany but also for the German contribution to the achievement of sustainability goals around the globe. On this basis, the Federal Ministry of Food and Agriculture (Bundesministerium für Ernährung und Landwirtschaft – BMEL) are also committed to numerous measures that encourage sustainable development in Germany and elsewhere in the world.



TABLE OF CONTENTS

1

*An appreciation
of good food*

PAGE 4

2

*Sustainable
management*

PAGE 8

3

*Living well
in rural areas*

PAGE 18

4

*Responsibility
in the world*

PAGE 22

5

*Digitalisation
as an opportunity*

PAGE 28

Diagram:

*An overview
of our goals*

PAGE 30

*Our
aspiration*

PAGE 32

An aerial photograph of a vegetable field. The plants are arranged in neat, parallel rows. There are two main types of leafy vegetables: bright green ones and deep red ones. The soil between the rows is dark brown and appears to have some mulch or organic matter. The lighting is bright, suggesting a sunny day.

1

An appreciation of good food

A sustainable food policy means protecting the environment and resources and promoting a social and economic balance along the entire food chain. That is why the BMEL is supporting the production and availability of healthy and diverse foods in Germany – for future generations, too.

Conscious and healthy eating

More and more people are overweight – an alarming symptom of modern, affluent societies. In Germany, around 47 percent of women and 62 percent of men are affected; almost one-fifth of adults are obese. More and more children are overweight, too. The BMEL advocates a healthier choice of foods and greater nutritional awareness to combat this issue and reduce nutrition-related diseases.

LESS SUGAR, FAT AND SALT

With their National Reduction and Innovation (NRI) strategy, the BMEL and the Federal Government, together with associations and institutions from the fields of nutrition, health, the food industry, consumer protection and science, wish to reduce the levels of sugar, specific fats and salt in convenience foods. The goal is to make it easier for consumers to make healthy choices. This is being achieved via voluntary commitments by the food industry. By the end of 2025, for instance, the sugar content in children's breakfast cereals is to be reduced by at least 20 percent. Children's yoghurts are to contain around ten percent less sugar and soft beverages at least 15 percent less.

Furthermore, the bakery trade association will use awareness-raising campaigns to advocate a reasonable and moderate use of salt in their industry to reduce the excessive use of salt in bread. Frozen pizzas are to contain less salt, too. In addition, the strategy emphasises the integration of this issue into professional training in the production and trade of artisanal food. In this way, young professionals will learn how to lower the content of sugar, fats and salt. The BMEL is closely observing the success of the NRI, which is also subject to scientific monitoring. Moreover, the BMEL is funding innovative approaches in several research projects to reducing sugar, fats and salt in processed foods, meals in away-from-home consumption and mass catering.

Children's
breakfast
cereals are
to contain

20%

less sugar by the
end of 2025.



NUTRITIONAL EDUCATION FOR YOUNG AND OLD

The BMEL wants to ensure that children and adolescents can grow up in a healthy way. In 2008, the Federal Government adopted the National Action Plan entitled "IN FORM – Germany's initiative to promote healthy diets and physical activity". Its goal is to prevent unhealthy eating habits, a lack of physical activity, excess weight and the related diseases. Diet and physical activity are seen as a single unit: as equal and essential components in a healthy lifestyle. In over 200 projects already, participants have jointly pursued the goal of improving eating and exercise habits in Germany in a sustainable way. The aim is to counteract the diseases associated with an unhealthy lifestyle.

One focus of the Action Plan is to strengthen expertise in and knowledge about the topic of nutrition – in all age groups, but particularly in children and adolescents. After all, the foundations of healthy eating habits are already laid during childhood. This is why the BMEL advocates for comprehensive nutritional education – closely associated with healthy meals in day care and schools.

In 2018, almost 2.3 million children (aged from 0 to 7 years) received meals in child day-care centres. In particular, the number of children under three being looked after in child day-care centres has more than doubled, from around 300,000 in 2008 to more than 600,000 in 2018. On behalf of the BMEL, materials have been developed to inform various age groups about healthy nutrition. More than one million children have since obtained their “nutrition certificate” in primary school. Working together with the federal states, networking centres for healthy meals in schools and child day-care centres have been set up. These help schools and day-care centres to prepare and offer healthy food.

There are also plans to set up such a network of centres for senior citizens. Their remit: to improve nutritional awareness in older people and help promote social inclusion. This has been prompted by the fact that the diet and fitness of senior citizens are taking on increasing importance due to demographic change. In 2050, according to forecasts, one in three people in Germany will belong to the “60-plus generation”.

**RESEARCH IS
UNDERWAY ON:
WHAT CHILDREN NEED**

The Department of Child Nutrition, opened by Federal Minister Julia Klöckner within the Max Rubner Institute, addresses the dietary and eating habits of school-children and adolescents. In addition, its experts study the health impact of diet during pregnancy and early childhood. In the field of child nutrition, the Department is a beacon for research both in Germany and on the international stage.

Producing and consuming responsibly

In Germany, around 12 million tonnes of food every year end up being thrown away. Food is wasted at each stage of the food-supply chain but private households generate the lion’s share of food waste. Given that more than 800 million people are going hungry around the world, this is ethically unacceptable and a waste not only of money but also of environmental resources: clean air and water, fertile soil and energy. The BMEL intends to increase the appreciation of food in all areas of the supply chain and is therefore against waste and in favour of sustainable consumption.

A GREATER APPRECIATION OF FOOD

In accordance with the 2030 Agenda, the BMEL is aiming to halve food waste per capita in Germany by 2030 – in the retail trade and by consumers. Furthermore, the Ministry intends to reduce food waste generated along the production and supply chain. This also applies to post-harvest food losses. To this end, in 2019 the Federal Government adopted the National Strategy for Reducing Food Waste which identifies possible causes, challenges and areas of action to be taken to reduce food waste along the entire supply chain. The strategy’s goal is to bring about a shift in societal attitudes towards a greater appreciation of food.

Businesses, scientists, policy makers and civil society groups are establishing concrete measures and targets. This includes harvesting and using misshapen vegetables. Businesses will offer demand-driven order sizes and redistribute food more frequently between their branches. The distribution system between the food industry and not-for-profit aid agencies will also be optimised.

These measures must be verifiable. Thus, in conjunction with the German Sustainability Strategy, an interdepartmental working group is developing an indicator to be used to measure food waste at all stages in the food supply chain.

NATIONAL PROGRAMME FOR SUSTAINABLE CONSUMPTION

In 2016, the Federal Government adopted the National Programme for Sustainable Consumption. This aims to help raise awareness about this topic among the general public and enhance consumption know-how in consumers. A key component of the programme is the “Consume sustainably – experience biodiversity” project launched by the BMEL in 2017. This identifies ways in which producers, food retailers and consumers can work together to preserve biodiversity via a more sustainable agriculture and more conscious purchasing decisions.

Furthermore, the programme encompasses several other projects in the fields of nutrition and agriculture that all pursue the goal of facilitating a diet that is healthy, animal friendly and environmentally compatible and that everyone can afford and integrate in their daily lives. To strengthen regional products, the BMEL initiated the “regional window” initiative with a private sponsor association as far back as 2014. This shows consumers at a glance where products are sourced and processed. This means it is possible to quickly check just how regional products actually are.

RESEARCH IS UNDERWAY ON: STRONG NETWORKS AGAINST WASTE

In 2015, a resolution was passed at the Meeting of Agriculture Chief Scientists (MACS) in the G20 countries to pool research and policy advisory capacities and to set up an initiative to reduce food waste. Germany took the lead country role. Since 2016, the Thünen Institute has coordinated a global research network (the MACS-G20 Initiative on Food Losses & Food Wastes). This is a forum where companies and scientific bodies can meet and find partners for research projects.



With its “Too good for the bin!” initiative, the BMEL is raising awareness among the general public, consumers and the catering trade about reducing food waste. The initiative is being expanded into an umbrella brand as part of the current strategy and will, in future, encompass all sectors of the food supply chain. As a part of the initiative, the BMEL presents awards to projects entered into a national competition that demonstrate an exemplary commitment to preventing food waste.

2

Sustainable management

More than 80 percent of land in Germany is used for agriculture and forestry to supply food and raw materials. The way in which agriculture and forestry are operated has a major impact on nature and the environment. The BMEL gives high priority to advocating the careful stewardship of natural resources and protecting the environment and climate.



Careful stewardship of resources

Natural resources such as soil, water, air and biodiversity are the most important foundations of the food, agriculture, forestry and fishing industries. The sustainable handling of resources is necessary to ensure the production of high-quality foods in the future. There is still a great deal that needs to be done in this regard. For example: until 2019, the permitted upper limit of nitrates in groundwater was being exceeded at 28 percent of measurement points in areas with extensive agricultural use. The BMEL is consistently directing its strategies towards the ongoing promotion of sustainable forms of farming. With its Policy Strategy on Bio-Economy, the BMEL is also pursuing the goal of connecting the economy and ecology to promote sustainable management. This holistic approach adopted in the bio-economy encompasses the exploitation, improvement and use of biological resources, processes and systems, whether in agriculture and forestry, in food production or in the services sector.

RESPONSIBLE AGRICULTURE

Mineral fertilisers and farm manure – in particular, liquid manure, biogas digestates and slurry – are leading to a nitrogen surplus in many regions. This surplus, primarily in the form of nitrates, contaminates soils and groundwater. The German Sustainability Strategy includes the goal of reducing the nitrogen surplus on agricultural land to 70 kilograms per hectare by 2030. In recent years, this value has fluctuated between 80 and 100 kilograms per hectare. To reduce the use of fertilisers to an acceptable level, fertiliser legislation was already tightened in 2017. The aim is to apply only as much fertiliser as the plants can absorb. To meet the tighter goals of the EU Nitrate Directive, further steps were taken in 2019.

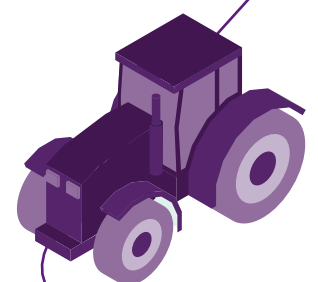
The Common Agricultural Policy (CAP) of the European Union seeks to promote the sustainable development of agriculture throughout Europe. Farmers have been obliged for a long time now to comply with a series of measures to obtain and improve the good agricultural and ecological status of the land they farm. EU agricultural payments come with obligations, for example, to promote environmental protection, the health of humans, animals and plants, and animal welfare. Furthermore, standards designed to reduce erosion, protect landscape features, plant areas with greenery and protect bodies of water must also be met. After 2020, the CAP will be refined further. In this context, the Federal Government is advocating higher environmental standards via “green architecture” i.e. the interplay between basic requirements for management, eco-regulations and voluntary, supplementary measures taken with regards to the agricultural environment and climate protection. Various measures will ensure that the CAP makes a greater contribution to environmental and climate protection and offers incentives to farmers in this respect. In the case of the basic requirements, a substantial minimum share of land is to be designated at a uniform rate across the EU for features such as hedges, wetlands and fallow sites.

THE FUTURE OF ORGANIC FARMING

In 2018, 9.1 percent of agricultural land was farmed organically – an economic system that engages in particularly careful stewardship of resources and is environmentally compatible. Thus, in the German Sustainability Strategy, the German Government has set itself the goal of increasing the share of organic farming to 20 percent by 2030. The strategy for the Future of Organic Farming supports this development with 24 action-based concepts. They include:

- further development of the European legal provisions for organic products
- support for the breeding and production of seeds
- promotion of organic value chains
- increasing the organic share of food consumed outside the home
- increasing funding for research into organic farming.

To this end, each year the BMEL is making 30 million euros of funding available in conjunction with the Federal Scheme for Organic Farming and Other Forms of Sustainable



Agriculture (BÖLN). Furthermore, the Federal Government is funding the introduction and maintenance of organic cultivation methods through the Joint Task Force for the Improvement of Agricultural Structures and Coastal Protection (GAK).

A WIN-WIN SITUATION THANKS TO PEAS AND BEANS

Protein crops have a positive impact on the environment and on agricultural ecosystems. This applies in particular to *leguminosae* such as broad beans, peas, soya beans and lupins. With the help of the *rhizobiaceae proteobacteria* on their roots, these crops fix atmospheric nitrogen, using it as a nutrient and also making it available to the successive crop. This saves on nitrogen fertiliser. Furthermore, the growing of *leguminosae*, also known as pulse crops, facilitates relatively short crop rotations, meaning fewer pests occur and the use of plant protection products can be reduced. In addition, flowering *leguminosae* offer an excellent nutritional base for nectar-collecting, pollinating insects. In its protein plant strategy, the BMEL is offering incentives to grow and use *leguminosae* in addition to cereals and oil seeds. The arable land for the cultivation of *leguminosae* for grain production increased from approximately 82,000 hectares in 2012 to almost 192,000 hectares in 2018.



Pulses for grain production were grown on almost

192,000

hectares in 2018.

FERTILE SOIL

In Germany, most of the soil is fertile. Agricultural enterprises harvest around three times more food per hectare than farms outside of Europe. However, non-sustainable farming has a negative impact on soil fertility, the environment, the climate and biodiversity. What is known as “good professional practice” therefore also encompasses, amongst other things, principles for the protection of soil during the cultivation and harvesting of plants. These principles are set out in the Federal Soil Conservation Act (Bundesbodenschutzgesetz – BBodSchG). A new indicator for soil protection is currently being developed in conjunction with the German Sustainability Strategy to reflect the special importance of soil.

Soil is also one of the focuses in the forthcoming arable land strategy in which the BMEL will establish the framework to more effectively reconcile the future production of food, feed and plant-based raw materials with the protection of the natural resources of soil, water and air. This will include setting up a network of lead farms for crop production to implement this strategy. The participating farms will implement the main elements of the arable land strategy and then demonstrate it to the general public.

Protecting the environment and the climate

There is a close interaction between the protection of the environment and the climate, and between food security and the availability of sustainable raw materials. Agriculture and forestry – as well as the fishing industry and aquaculture – are dependent on natural conditions. Therefore, they are particularly affected by climate change. Agriculture generates greenhouse gases but can also be part of the solution: arable land in Germany stores two and a half billion tonnes of carbon. Forests, too, sequester around 127 million tonnes of CO₂ equivalents every year. The BMEL is supporting agriculture and forestry to generate fewer emissions and to adapt better to the consequences of climate change.

FEWER EMISSIONS

The Federal Government's climate change goals in its 2050 Climate Action Plan envisage reducing annual emissions from by agriculture from 11 to 14 million tonnes of CO₂ equivalents between 2014 and 2030. When compared to the situation in 1990, greenhouse gas emissions have already fallen from 90 to 72 million tonnes of CO₂ equivalents, i.e. by approximately 20 percent. There is particular potential for savings in the following areas.

Since 2017, the BMEL has made substantial changes to legislation on the use of fertilisers to achieve the goal of limiting nitrogen surpluses set out in the German Sustainability Strategy. In future, fertilisers will lead to fewer emissions and will be specifically targeted at the needs of the plants. This will result in lower nitrogen surpluses and, by extension, in the emission of less climate-damaging nitrous oxide. In this way, greenhouse gases of at least 1.9 million tonnes of CO₂ equivalents can be avoided. The "CO₂ equivalents" unit set up by the United Nations indicates the degree to which a gas contributes to global warming – converted into the equivalent amount of CO₂.

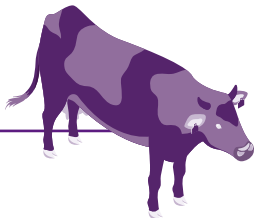
Farm manure likewise generates high greenhouse gas emissions. The storage of farm manure (with the exception of solid manure) in closed containers is therefore already a requirement in the construction of new farm buildings today. If liquid and solid manure are initially utilised to provide energy prior to their use as fertilisers, this considerably improves their climate footprint. This practice is currently leading to savings of around 2.19 million tonnes of CO₂ equivalents. Further savings can be achieved by substituting fossil fuels. The National Clean Air Programme will likewise help to reduce emissions via various measures.

EFFICIENT ENERGY USE

The Federal Programme to Increase Energy in Agriculture and Horticulture provides funding for advisory services and energy-saving measures in agricultural enterprises. This applies, for instance, to more energy-efficient greenhouses. Funding is likewise being provided for the retrofitting of up-to-date, particularly energy-efficient pumps and ventilators. From 2019 to 2021, 81 million euros will be available for this programme which aims to reduce the greenhouse gases generated by direct energy use in agriculture by 1.1 million tonnes of CO₂ equivalents every year by 2030.

RESEARCH IS UNDERWAY ON: THE BEST POSSIBLE USE OF FEED

Funding is being made available for research projects in the area of animal nutrition that examine how feed nutrients can be used on the largest possible scale whilst producing fewer emissions. This includes, amongst other things, feeding strategies for ruminants that lead to lower levels of nitrogen compounds (for instance ammonia) being released through excretions.



ADAPTING TO CLIMATE CHANGE

To meet the challenges of climate change, in 2008 the Federal Government adopted the German Strategy for Adaptation to Climate Change (DAS). To this end, two action plans have already been drawn up, and a third is being prepared. In this context, the government is focusing on reducing the vulnerability of nature, society and the economy to the consequences of climate change and enhancing their adaptive capacity.

The BMEL, together with the Federal Ministry of the Environment (Bundesumweltministerium – BMU) and the federal states, is drawing up an agenda based on the DAS. The Federal Government and the federal states will take steps to help businesses in agriculture, forestry, fishing and aquaculture to take precautionary and efficient measures and adapt to climate change. In this regard, equal consideration will be given to sustainability goals such as animal welfare, water and soil protection, the protection of biodiversity, air pollution control, safeguarding income, strengthening rural communities, integrated crop production and organic farming.

Preserving biodiversity

In Germany, over 30 percent of plant species, around 36 percent of all animal species and 70 percent of freshwater fish are deemed to be endangered. Furthermore, approximately 65 percent of habitats (types of biotope) are facing an elevated risk of being lost i.e. there is the risk that these habitats will disappear from Germany forever. The diversity of our crops and livestock, i.e. our genetic resources for food and agriculture, is also endangered. The BMEL, therefore, is giving its support to improving the biodiversity and agricultural structural diversity of arable areas. Here, the maxim is “Preservation through use”.

SPACE FOR ENDANGERED SPECIES

Agriculture can make an essential contribution to preserving and promoting biodiversity. The Common Agricultural Policy (CAP) of the European Union (EU) has put in place incentives for this purpose: five percent of arable land is to be used as ecological focus areas (EFAs) in the interests of the environment. The Federal Government is providing funding to set up and maintain certain types of land such as fallow sites, flowering strips, buffer strips adjacent to bodies of water and hedges. Furthermore, through the Joint Task Force for the Improvement of Agricultural Structures and Coastal Protection (GAK), the BMEL is assisting the federal states in implementing a number of region-specific support measures to preserve endangered indigenous plant varieties and animal breeds. Specific types of land can be funded especially for the purpose of protecting bees. In 2018, agricultural businesses in Germany had already registered around 15,400 hectares of fallow sites used for honey plants. Funding is likewise available for the productive use of arable land such as growing intercrops and *leguminosae*.

The BMEL’s Conservation of Agricultural Biodiversity, Development and Sustainable Use of its Potentials in Agriculture, Forestry and Fisheries strategy delivers important messages about preserving biodiversity. The BMEL is providing 3 million euros of annual funding for different approaches:

- On-farm management: the preservation of crops and livestock with parallel adaptation to changing environmental conditions and claims to use
- In situ measures: the preservation and reintegration of wild plants and animals that have the potential to be exploited for food and agriculture in their natural environment
- Ex situ measures: the preservation of plant species and varieties, and animal breeds by storing genetic resources in gene banks

The specialised programmes for plant, animal, forestry and aquatic genetic resources also contribute to the implementation of this strategy. The BMEL is funding the strategy from various budget lines via its departmental research and subordinate authorities. For instance, the German Fruit Gene Bank is being coordinated by the Julius Kühn Institute; the German Gene Bank for Ornamental Plants by the Federal Office of Plant Varieties (Bundessortenamt – BSA). The Federal Government is also making its own plant collections available. Throughout Germany, the Information and Coordination Centre for Biological Diversity (Informations- und Koordinationszentrum für Biologische Vielfalt – IBV) is coordinating all these preservation and utilisation measures. The Centre is attached to the Federal Office for Agriculture and Food (Bundesanstalt für Landwirtschaft und Ernährung – BLE).



15,400^{ha}

of land is intentionally left fallow by farmers in Germany to create areas for bee-friendly plants.

FARMS AS PARTNERS

The BMEL is also focusing on promoting nature conservation by providing comprehensive advice to individual farms and on a cooperative basis. One example is the F.R.A.N.Z. project for Resources, Agriculture and Nature Conservation with a Future (Für Ressourcen, Agrarwirtschaft und Naturschutz mit Zukunft) launched in 2017. Scheduled to run for several years, the project is being implemented by the German Farmers' Association (Deutscher Bauernverband – DBV) and the Michael Otto Environmental Foundation (Umweltstiftung Michael Otto). It is funded by the BMEL, the BMU and Germany's development agency for agribusiness and rural areas (Landwirtschaftliche Rentenbank). Its aim is for nature conservation organisations and farmers to work together to develop concepts that protect nature and, at the same time, can be implemented and are economically viable for the respective farm. Conventionally run farms are participating in the project. The knowledge gained by it will inform the shaping of further agri-environmental programmes.

Improving animal welfare

Animal-friendly husbandry also forms a part of sustainable agriculture. Societal attitudes are often at odds with modern agricultural practices. The keeping of livestock is being increasingly criticised by the general public: 81 percent of consumers are in favour of state-approved animal welfare labelling. The BMEL advocates livestock husbandry that assures high standards of animal welfare, meets with broad societal approval and is economically viable.

TOGETHER FOR MORE ANIMAL PROTECTION

With its livestock strategy, the BMEL has laid the framework for further improvements in this highly-developed sector. The strategy contains criteria for animal welfare and environmental protection as well as for quality in production and a market focus. It contains an exploration of what new animal stalls could look like and evaluates the lessons from model and pilot projects. Experts and farmers are sharing their expertise in these projects.

The plans for state-approved animal welfare labelling are likewise part of the strategy. The German cabinet has approved a draft law for the introduction of a three-tier animal-welfare label that will help consumers to identify products whose manufacture meets higher standards than those required by law. At the same time, it opens up new, future-oriented marketing perspectives for farms. The labelling criteria were defined jointly by representatives from science, trade associations and animal welfare and consumer protection associations. They cover the entire value chain – from the birth to slaughter of an animal. In addition to the animal husbandry conditions and animal health, the animal welfare label includes management-related aspects. Once the legislative process is complete, production can begin in line with the standards on the animal-welfare label. The first step is to check whether a farm meets the stiffer requirements for the husbandry, transport and slaughter criteria of a specific tier. If this is the case, the farm can participate in the animal-welfare label scheme. The label will apply initially to pigs and will then be broadened out to include other livestock.

IMPROVED ANIMAL WELFARE THROUGH NEW SOLUTIONS

The BMEL is relying on businesses to take the initiative following the principle of a voluntary binding commitment. However, if voluntary commitment does not lead to the necessary improvements, changes to the legal framework may also be necessary. Progress has been made in cooperation with

agricultural businesses to find solutions for major animal welfare problems connected to the husbandry of egg-laying hens. Hatcheries stopped trimming the beaks of chicks intended for German laying-hen production in 2017. The first procedures for determining the sex of a chick in the egg have now been introduced to avoid the killing of male chicks.

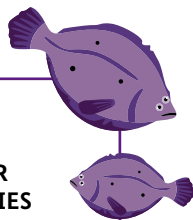
Other areas have not seen voluntary agreements up to this point. To end the castration of piglets without anaesthesia, the BMEL is doing everything it can to develop alternatives. In this context, it is important for these alternatives to be compatible with implementation in practice. The BMEL has already invested several million euros in research. For instance, a BMEL-funded research project on local anaesthesia was launched in October 2018; since the summer of 2017, two model and pilot projects have carried out piglet castration with anaesthesia. The mid-term goal here is the greatest possible prevention of non-curative procedures, such as tail docking in the livestock industry.

Shaping the fishing industry in a sustainable way

According to estimates by the Food and Agriculture Organisation (FAO), around a third of commercial fish stocks are overfished. Key stocks in EU waters have not been managed sustainably in the past: for instance, cod in the North Sea and Eastern Baltic cod in the Baltic Sea. For years the BMEL, together with the EU, has been pressing for the sustainable management of all fish stocks based on scientific advice.

RESEARCH IS UNDERWAY ON: CATCH QUOTAS FOR THE TOP FIVE SPECIES

Herring, cod, plaice, sprat and salmon are the main species of fish to be economically relevant in the Baltic Sea. Annual catch quotas have been drawn up to protect them, based on the advice of the International Council for the Exploration of the Sea (ICES) in which the Thünen Institutes for Sea Fisheries and Baltic Sea Fisheries – both within the remit of the BMEL – are involved. The advice and assessments are based, among other things, on the data from research trips and catch data from the fishing industry.



CATCH QUOTAS

TO PREVENT OVERFISHING

The reformed Common Fisheries Policy stipulates that all fish stocks in EU waters must be sustainably managed by 2020 at the latest – an important milestone. In the case of EU decisions on annual total allowable catches, major progress has already been made thanks to the reform. In 2019, far more than 70 percent of north-east Atlantic stocks should have been sustainably managed. In terms of the actual volumes landed by fishermen and women, currently 98 percent of fish already come from sustainably managed stocks. This is because large commercial stocks like herring or saithe are already being sustainably managed. The volumes of fish being caught from these species are several times larger than those of smaller stocks that are still being overfished. Strict catch quotas are responsible for this positive development.

For marine-protected areas in German waters – as designated by EU law – specific measures are being developed with neighbouring countries to regulate the fishing industry. Proposals for the North Sea, for example, provide for the protection of reefs, sandbanks, porpoises and seabirds. To guarantee such protection, fishing with bottom-trawling equipment and gillnets will both be regulated.

DEVELOPMENT OF SUSTAINABLE AQUACULTURES

Aquaculture is currently the highest growth food production sector in the world. If managed sustainably, it can make a major contribution to food security for future generations. When compared with other methods of producing animal protein, aquaculture has the best environmental balance. Furthermore, it can continue to grow thanks to as yet untapped resources. The Joint Strategy Aquaculture Plan of the Federal Government and the federal states sets out how sustainable aquaculture can be extended in Germany. For instance, experts with experience in this area will help speed up approval procedures.

Good management of forests

One-third of Germany (11.4 million hectares) is covered by forest, representing more wood than in any other country in the European Union. German forests are taking on an increasing importance both for the protection of nature and species and as sites for leisure and recreation. Furthermore, the significance of wood as, building and working material is growing – also in the context of the Federal Government’s energy and climate goals. However, climate change, extreme drought and the related pest infestations are causing major damage to forests. This is presenting forest-related industries with new challenges. The BMEL is undertaking major efforts to deal with the current damage and to better adapt German forests – for example, with location-adapted planting – to climate change.



138 million m³

of wood were used in 2017 for materials and energy, including around 93 million cubic metres from primary biomass such as forest wood, bark and wood removed in landscape conservation. The rest mainly came from wood waste in industrial processes and post-consumer recovered wood.

AN OVERVIEW OF ALL OBJECTIVES: THE 2020 FOREST

In its 2020 Forest Strategy under the aegis of the BMEL, the Federal Government addresses complex interrelations and different objectives. The strategy sets out how forests can be adapted to climate change. One core element in this is forest stand improvement. After World War II, large-scale pure stands were planted out of necessity. Their further development into adaptive mixed stands of deciduous and coniferous trees is ongoing. Another part of the Forest Strategy focuses on how the raw material of wood can be used in an efficient and value-added manner. The Charter for Wood 2.0 is designed to specifically shape the strategy for the use of wood from sustainable forestry and is a milestone in the Federal Government’s 2050 Climate Protection Plan. The Forest Strategy is being further developed as a long-term strategy for the forest of the future (2050 Forest Strategy). Given the growing frequency of extreme weather events, the increased adaptation of forests to climate change will be one of the focuses in this strategy.

The Federal Government’s policy for sustainable forest management is bearing fruit. Despite increasing consumption, timber reserves in Germany rose by seven percent between 2002 and 2012 to 3.7 billion cubic metres of wood. In 2014, sustainable forest management and the associated use of wood in Germany

sequestered approximately 127 million tonnes of CO₂ equivalents and thus reduced CO₂ emissions by around 14 percent.

Ninety billion old and young spruce, pine, beech and oak trees and rarer tree species shape the appearance of German forests. The proportion of deciduous trees is increasing. Deciduous and mixed forests now account for 73 percent of woodland – an important basis for biodiversity. Sustainable forestry is also strengthening economic development in rural areas. Around 1.1 million people work in approximately 125,000 enterprises in this sector and generate more than 180 billion euros of sales revenues per year.

CONSULTATION ON ALL ASPECTS OF WOOD 2.0

Following its maxim to “Protect the climate – Create value – Use resources efficiently”, the BMEL has launched a consultation process backed by the Federal Government, the federal states, businesses and the scientific community with its Charter for Wood 2.0. The BMEL wishes to use this charter to strengthen climate protection and the responsible use of finite resources. Furthermore, it can preserve and enhance the addition of value and competitiveness of the forest and wood sector.

Sensible use of renewable resources

Until now, economic growth and technological progress have been primarily based on the use of fossil resources. In future, however, these will no longer be available on the necessary scale. A sustainable policy must, therefore, tap into new, renewable sources of raw material without jeopardising food security.

NEW OPPORTUNITIES THANKS TO BIOMASS

Organic composite materials offer up to a

60%

reduction in weight when compared to steel.

If fossil fuels are replaced by biomass, far less CO₂ will be produced. Biomass can be used to manufacture chemicals, materials and other bio-based products. Furthermore, it can be converted into heat, power and fuel. Biomass is an important source of added value, particularly in rural areas. The BMEL has, therefore, developed a Funding Programme for Renewable Resources to fund research and development projects connected to the recovery of materials and energy in renewable resources. More than 80 million euros have been earmarked for this in the BMEL budget.

Around 3.7 million tonnes of renewable resources were used as materials in Germany in 2017. The product spectrum ranges from building materials to paper and cardboard, from lubricants and intermediate materials in the chemical industry to medicinal products, cosmetics, varnishes, textiles and many other items. At almost 50 percent, carbohydrates (starch, sugar, cellulose) account for the largest share of these resources. Approximately three-quarters of the total used volume of renewable resources are processed in the chemical industry. The BMEL is promoting new areas of use for bio-based products and innovative methods and processes for serial production. For example: the Bio-Concept Car project is seeking to develop a sustainable and lightweight structure with plant fibres for

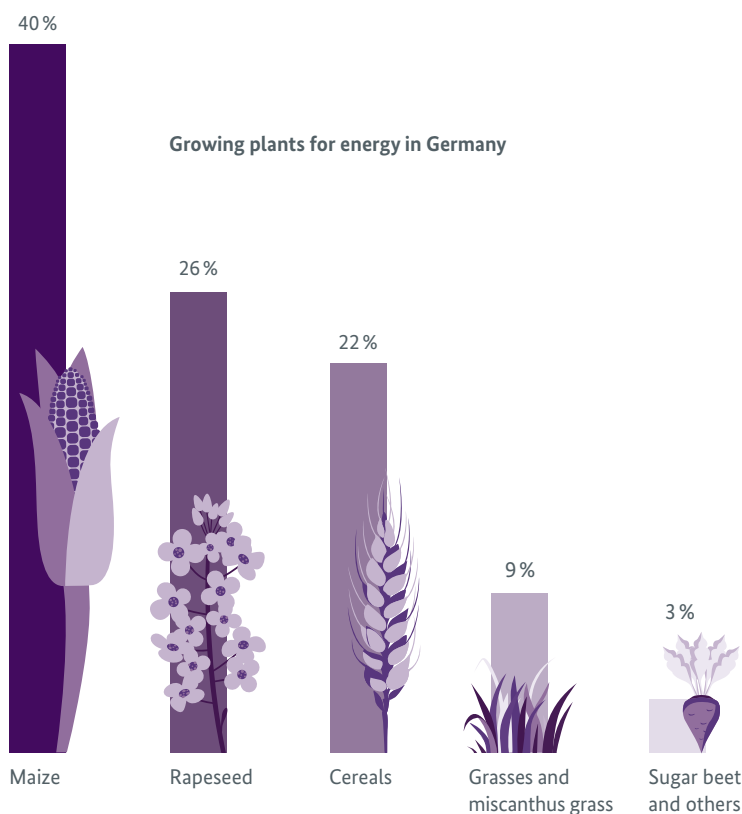
future-centric mobility. To this end, concepts for innovative materials are being tested that will facilitate use of a high proportion of renewable resources. After all, bio-composite materials offer an enormous reduction of up to 60 percent in weight when compared to steel.

RENEWABLE ENERGY SOURCES

In addition to wind energy, hydropower and solar energy, storable biomass plays a particularly important role as a source of renewable energy. It is diverse and can be converted into both heat and power, as well as replacing fossil fuels. Bioenergy reduces greenhouse gas emissions because the maximum amount of carbon dioxide released is the amount previously ingested by the plants. In 2018, biomass made the largest contribution to energy usage from renewable sources with a total share of 60 percent, ahead of wind energy (22 percent) and solar energy (10 percent).

To enable rural areas to benefit from this development, the BMEL is running a national competition for bioenergy municipalities and is presenting awards to those who provide exemplary models of the innovative and sustainable use of bioenergy.

Even if criticism is being voiced in isolated cases about growing plants for energy, it can nevertheless be confirmed that sufficient land is available in Germany for the cultivation of such plants. The disproportionately high cultivation of maize for biogas use occurring in a few regions has now been reduced following an amendment to the Renewable Energy Act (Erneuerbare-Energien-Gesetz – EEG). Bioenergy is being made available not just from renewable resources but also from biogenic residual matter and waste material. These flows of material are available in large volumes around the globe. In future, the BMEL will advocate for the large-scale exploitation of this unused potential, particularly in the case of residuals from the forestry industry, straw, slurry and manure. To this end, the BMEL is funding the AG BioRestMon project to develop a comprehensive database of biogenic residuals and waste materials in Germany.



3

Living well in rural areas

For rural areas to be competitive, they have to offer attractive jobs, comprehensive services and connections to up-to-date infrastructure. The BMEL is committed to all of this – and is counting on the diverse commitment of people in the region.



Promoting development

Around 90 percent of Germany consists of rural areas. Over half of the German population lives in rural areas and most small and medium-sized companies are based there. However, rural regions are facing major challenges: demographic change, gaps in basic services and the trend towards people moving to the cities have shaped daily life in many areas. The BMEL is pursuing a clear goal with its policy to ensure that rural areas are worth living in and fit for the future.

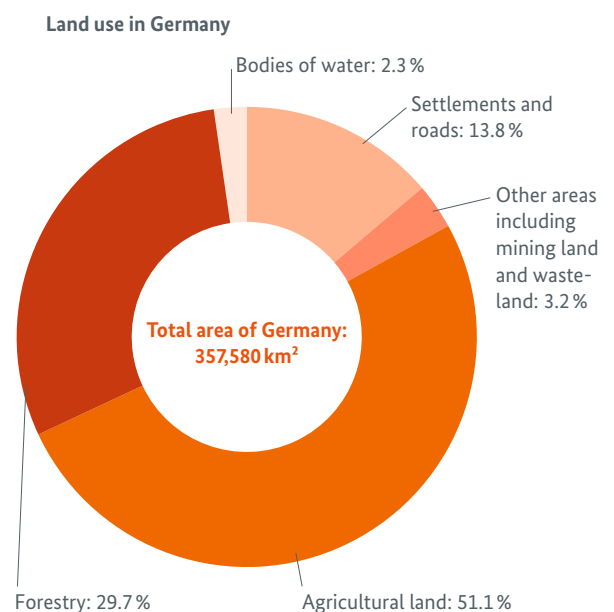
VILLAGES WITH A FUTURE

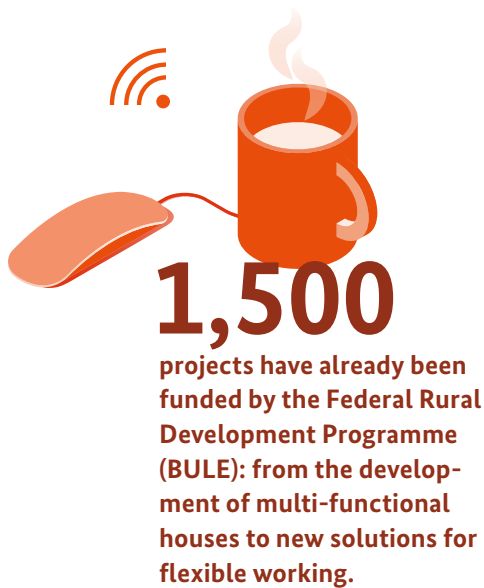
In Germany, the Joint Task for the Improvement of Agricultural Structures and Coastal Protection (GAK) is the most important instrument to support the development of rural areas. With a focus on “Integrated rural development” (ILE), the Federal Government and the federal states are supporting rural regions in Germany. In 2019, total funding in excess of 465 million euros was available for this goal. Support is being provided, amongst other things, for measures to develop villages and shape rural areas, including biotope networking and the extension of broadband networks. Even micro-enterprises are receiving funding. As part of the programme to develop villages, municipalities can, amongst other things, purchase and convert former schools and empty buildings. This can lead to the emergence of new spaces to revitalise and nurture village culture. The search is not simply for solutions in individual sectors but for integrated approaches that can serve the common good on the local, municipal and inter-municipal levels. Municipalities are working together to establish networks with committed citizens: they can, for example, encourage generations to talk to each other, offer help in daily life and provide support for refugees.

Many municipalities are seizing this opportunity to utilise empty buildings or gaps between buildings to provide new building sites as part of village renewal. This also decreases the demand for new settlements to be built on the edge of villages. Other ILE projects are pursuing a similarly integrated approach by reconciling social, cultural, ecological and economic goals. Of particular importance in this context is to use fewer areas for settlements and roads in order to protect unbroken agricultural ecosystems.

CAUTIOUS LAND USAGE

What are areas of land used for? This is a central question in integrated rural development. In its Sustainability Strategy, the Federal Government has set the target of reducing the increase in settlements and roads to a maximum 30 hectares per day by 2030. In particular, the loss of arable land must be limited. In this context, the BMEL is supporting the principle of “internal before external development”. All measures funded by the GAK must consider the impact on land usage. The first successes are already being registered: between 1996 and 2017, the increase in land used for settlements and roads was halved, from around 120 to 58 hectares per day.





Since 2015, the Federal Rural Development Programme (BULE) has been funding model projects to obtain findings that can be transferred to other regions. This includes projects which strengthen regional economic power and basic services in rural areas. Funding is also being provided for local amenity networks, measures for social village development and multi-functional buildings. Furthermore, BULE is supporting the development of digital solutions for rural areas which offer, for instance, new opportunities for flexible working or improve local amenities and the local public transport network.

BULE funds are likewise being used to support and implement more than 1,500 projects across Germany. Approximately 45 million euros have been used in this way to the present. With the Rural(Up)Swing (Land(auf)Schwung) model project, the BMEL is funding 13 selected districts in structurally weak rural areas, giving them an independent regional budget to actively combat demographic change, increase regional addition of value and safeguard jobs in rural areas. The districts are doing all this with scientific support and the help of people on the ground.

Creating perspectives

Agricultural enterprises still play an important role in rural areas – both economically and socially. However, globalisation and technological progress are accelerating structural changes: while the average company size is steadily growing, the actual number of agricultural enterprises has fallen by 60 percent since 1991. The BMEL is advocating the preservation of diverse types of agricultural enterprises and, in particular, opening up opportunities for family-run farms.


SOCIAL SECURITY WITH A FUTURE

The BMEL is advocating the preservation of an independent agricultural social security system that offers financial protection to independent farmers and their families, for instance, in the event of illness, the need for long-term care, accidents at work or in old age. This system helps to win societal support for structural change in agriculture. BMEL is providing funding of around 4 billion euros a year for this programme. The future viability of the system is being ensured through ongoing reforms.

Options of support are available to young farmers, too, who receive an additional premium to a maximum 4,000 euros a year for the first five years after starting their farm. The Agricultural Investment Aid Programme (AFP) also offers them financial support. For instance, in 2018, 31 million euros was made available from funds from the Federal Government, the federal states and the EU to finance investment measures in young farmers. Advisory services are likewise funded. Farmers can make use of these services when they have questions, for instance, about financing or economic viability.

ATTRACTIVE GREEN JOBS

The demand for agricultural jobs has remained steady despite demographic changes. In 2017, around 32,900 young people underwent training for a career in agriculture. These young people will benefit from many opportunities but also face some challenges. Work processes are increasingly becoming automated and digitalised. At the same time, diverse societal expectations when it comes to consumer protection, animal welfare and biodiversity must be met. The qualifications of these future experts and managers are therefore subject to ongoing appraisal and adjustment in close cooperation with primary, further and continuing training. At present, there are 14 “green occupations” ranging from hunting ground supervisor to farmer, from vintner to fisherman or woman.



32,900
young people underwent
training in an agricultural
occupation in 2017.

PRIORITY FOR PEOPLE FROM THE REGION

Current developments in the land market stand in opposition to the BMEL's goals for rural areas. Many sites are in the hands of national investors and this is frequently associated with the draining of the creation of value in structurally weak rural areas. In contrast, a wider spread in the ownership of land assets can help to maintain production and employment embedded in the region. Federal states should endorse priority being given to farmers with roots in the region when it comes to the purchase and tenancy of arable land. The land law provisions in the Act on Real Estate Transactions (Grundstücksverkehrsgesetz – GrdstVG) and the Act on the Notification of and Objection to Agricultural Tenancy Dealings (Gesetz über die Anzeige und Beanstandung von Landpachtverträgen – LpachtVG) support such farmers.

These Acts should be reviewed and aligned with new developments. The BMEL is supporting the federal states when it comes to amending land-law provisions. The goal here is to promote a balanced structure of agriculture and dissuade non-agricultural investments.

4

Responsibility in the world

Sustainable development can only succeed if it is implemented in a global and cooperative manner. Hence, the BMEL endorses vision, is actively involved in international networks and is developing measures to ensure food for all and to protect oceans and forests around the globe.



Securing food globally

In recent years, armed conflicts, economic crises and climate change have resulted in a renewed increase in the numbers affected by hunger to 821 million people around the globe. Furthermore, around two billion people suffer from an inadequate supply of micronutrients. The BMEL supports Sustainable Development Goal #2 of the 2030 Agenda to end hunger around the world and make it possible for everyone to have access to diverse, balanced and safe food.

WELL-DIRECTED GUIDANCE

In order to enforce the human right to adequate food, the BMEL is focusing its cooperation in norms and guidelines under international law within its Global Food Concept. To this end, the Ministry is particularly supporting the work of the Food and Agriculture Organisation of the United Nations (FAO) and its Committee on World Food Security (CFS), for instance, by applying the Voluntary Guidelines on the Right to Food, the Principles for Responsible Investment in Agriculture (RAI) and the Voluntary Guidelines on Land (VGGT).

MORE KNOWLEDGE ABOUT FOOD

The BMEL is funding specific international research cooperation on the subject of food security. One example of this is the “Scaling-up Nutrition” project in Tanzania which encompasses, amongst other things, training courses for rural households and schools. The courses provide information on diet and growing food, with the participants also learning about digital applications for food marketing.



SUPPORT FOR PEOPLE ON THE GROUND

With its bilateral cooperation programme, the BMEL is helping emerging economies around the world to develop productive and sustainable agriculture and food sectors. For instance, pilot and training projects are educating company employees, teachers and students in subjects including crop rotation, fertilisation and plant protection, soil cultivation, fuel-efficient use of machinery and the reduction of harvest losses.

The BMEL is likewise supporting the work of the FAO through its Bilateral Trust Fund (BTF) with additional project funding of around 10 million euros annually. In this context, it is promoting projects which aim, for instance, to ensure safe access to land and natural resources or to encourage a balanced diet, rural development and sustainable agriculture. In Ethiopia, for example, the BMEL is supporting people in rural areas who only have limited resources at their disposal. To increase the yield and consumption of fruit and vegetables, it is using measures including improved post-harvest technology.

The sustainable use of forests

The world population is growing – and consequently its need for food, living space, energy and raw materials is, too. At the same time, the climate and environment must be protected. It is, therefore, even more important to preserve forests around the world. Roughly 30 percent of the earth’s surface is still covered by forest – just under four billion hectares. However, the area of forestation is shrinking steadily around the world, albeit at a slower pace than in previous years. The BMEL is proactively involved at various levels in halting the destruction of forests.

KNOW-HOW FOR FOREST MANAGEMENT



1,391

applications for tests to identify timber species were received in 2018 alone by the Thünen Centre of Competence on the Origin of Timber.

Through international agreements and specific projects, the BMEL is supporting sustainable forest management in key partner countries around the globe. The Strategic Plan of the United Nations for Forests was approved in 2017 and sets out, among other things, the requirements for modern, sustainable and multi-functional forest management. This includes secure land tenure, forestry training, a functioning forest information system and forestry planning. The criteria for the sustainable management of forests were developed and are being regularly improved in negotiation with the United Nations and the Ministerial Conference on the Protection of Forests in Europe (FOREST EUROPE).

In Germany, the Federal Office for Agriculture and Food (BLE) monitors whether timber importers are complying with the EU provisions on illegal felling. Between 2013 and 2018, the 200 biggest companies – responsible for 70 percent of the total import of timber products into the EU – were examined. This led to many importers improving their systems. In 2013, the BMEL set up the Thünen Centre of Competence on the Origin of Timber to provide information on determining wood species, proof of origin, timber trade flows and legality checks. In this way, the Centre is helping the timber trade to improve its import controls. The need for information is constantly growing: in 2018 alone, it received 1,391 applications for tests to identify timber species.

CONTROLLED CULTIVATION OF PALM OIL, SOYA AND COCOA

Non-sustainable agriculture is the biggest driver of deforestation around the world. The conversion of forests to agricultural land is responsible for around 80 percent of global forest destruction. To put an end to this, the BMEL is supporting, amongst other things, the Forum for Sustainable Palm Oil (FONAP) and the German Initiative on Sustainable Cocoa (GISCO), which are both pushing for the use of raw materials certified as sustainable. International sustainability standards are the foundation for such certification. The goal is to offer palm oil and cocoa producing countries incentives to preserve their forests and promote sustainable land use. Since 2014, on the initiative of the BMEL, the national dialogue forum on More Sustainable Protein Feed has discussed how similar measures can be put into prac-

FORUM FOR SUSTAINABLE PALM OIL (FONAP)
 The BMEL has joined forces with companies, non-governmental organisations and associations to improve cultivation practices in the palm-oil sector. All companies that are members of the FONAP have entered into a public voluntary binding commitment to only use palm oil that is certified sustainable. The BMEL expects all companies in Germany using palm oil to follow this example.

tice for soya. Germany has joined forces with six other European countries in the Amsterdam Partnership. These countries represent around 70 percent of the buyers for the total European importation of palm oil, soya and cocoa. Together, the partner countries are advocating sustainable and deforestation-free supply chains for these important agricultural goods by 2020.

Preserving living oceans

For many people, the oceans are one of the central foundations of their livelihood. Approximately 3.2 billion people receive around 20 percent of their animal protein requirements via products from the fishing industry and aquaculture. To ensure that the oceans will be able to continue to feed people in the future, the protection of maritime ecosystems is becoming more and more important. However, the world's oceans are polluted and generally overused. Just under one-third of fish stocks are overfished. The BMEL is, therefore, working on an international level to promote the sustainable management of marine resources and protect the oceans and marine mammals.

RULES FOR SUSTAINABLE FISHING

The FAO Committee on Fisheries is the primary international body dealing with questions concerning the international fishing industry and aquaculture. For some time now, the BMEL has advocated the introduction of binding rules as the basis for sustainable fishing. Here are some examples that have been pointing the way:

- the Agreement on Conservation and Management Measures (1993)
- the Code of Conduct for Responsible Fisheries (1995)
- the International Plan of Action to Prevent, Deter and Eliminate Illegal Fishing (2001)
- the Agreement of Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (2009).

This latter agreement provided an important impetus for a new direction in fishing policies in FAO member states and the management of fish stocks within the framework of regional fishing organisations. With the reform of its Common Fisheries Policy in 2002 and 2013, and the Regulation to Deter Illegal Fishing in 2008, the EU has – with the major support of Germany – consistently implemented these measures.

ESTABLISHING

MARINE-PROTECTED AREAS

Protected areas can make an important contribution to preserving habitats and biodiversity – especially in the high seas. However, there are only nine protected areas in the high seas around the globe. In the Antarctic Ocean, a representative network of marine-protected areas is now being established. The Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), amongst other bodies, is committed to this initiative. Its efforts constitute an important step by the international community to regulate the protection of the marine environment and, at the same time, the sustainable use of marine resources.

RESEARCH IS UNDERWAY ON: MARINE PLASTIC LITTER

The BMEL's "Plastic litter and marine fish" research project is examining the scale and impact of microplastics on fish in the North and Baltic Seas. The goal is to provide an improved assessment of the health risks for both fish and consumers.



The BMEL is expressly advocating for the designation of further marine-protected areas in the Antarctic and has also submitted specific proposals: for example, part of the Weddell Sea is to be protected. The proposal is based on research findings by the Alfred Wegner Institute (AWI) and encompasses a site with an area of approximately 1.8 million square kilometres – five times the size of the Federal Republic of Germany. This would make it by far the largest marine-protected area in the world.

The BMEL is also committed to the protection of marine mammals. Within the International Whaling Commission (IWC), the BMEL has long endorsed the comprehensive protection of whales and is categorically opposed to commercial whaling. The same applies to the “scientific whaling” undertaken in the past, particularly by Japan. The moratorium that has been in place since 1986 has had a very favourable impact on the development of a number of large whale species. It prohibits any form of whaling and only permits exceptions for indigenous peoples.

Supporting fair trade

The cultivation of arable land and the crop yield it provides are distributed unevenly around the world. For instance, in 2016 the least-developed countries had a share of less than 1.5 percent of the global agricultural trade although they farm 16 percent of arable land. The aim is to connect all countries in the global trade of goods for the agri-food industry, sustainable forest management and the fishing industry. This is the only way to promote growth and development in a sustainable manner. The BMEL, therefore, supports open markets and rule-based trade which is fair to the specific needs of developing countries.

AGRICULTURAL TRADE AS AN OPPORTUNITY

Trade in agricultural goods will take on even more importance in the future. This is because it balances supply and demand in the face of ongoing climate change, a growing population and dwindling resources in land, water and biodiversity. At the same time, trade ensures economic and societal development and stability, particularly in the poor and poorest countries in the world, offering these countries an opportunity to earn foreign currency and combat poverty in a concerted manner. Agricultural trade can likewise contribute to safeguarding global food security.

In order to create sustainable trading rules, it is particularly important for the prohibition of export refunds – also a goal of the 2030 Agenda – to be implemented globally. Furthermore, comparable export-promoting measures must be dismantled and trade-distorting subsidies abolished to avoid disadvantaging countries in international competition. The BMEL is also supporting these goals within the EU. This includes the reform of the Common Agricultural Policy (CAP) and EU proposals to the World Trade Organisation (WTO) to limit subsidies and to continue developing global trade rules.

In bilateral trade agreements, the BMEL is working to ensure that sustainability is a key component. For instance, the Ministry is contributing to the implementation of international agreements on the protection of natural resources and central social norms. By the means of bilateral agreements on economic partnerships with the EU, developing countries are being given the opportunity to gain unlimited access to the EU market and, at the same time, the required flexibility to secure their agricultural markets by means of long transition periods or extensive exemptions.

RESPONSIBLE PARTNERSHIPS

In modern trade agreements with the EU, both partners undertake:

- to effectively implement their own environmental and labour laws
- not to lower the level of protection in provisions regarding the environment and the workforce in order to secure advantages in trade or investment
- to sustainably exploit resources such as timber and fish for trade
- to promote trade in environmental goods and services and climate protection
- to strengthen the practices of responsible corporate governance
- to implement international environmental agreements such as the Paris Agreement of 2015
- to respect and implement the core labour standards of the International Labour Organisation (ILO):
 - freedom of association and the right to collective bargaining
 - the elimination of forced or compulsory labour
 - the abolition of child labour
 - the elimination of discrimination in respect of employment and occupation.

The BMEL is likewise supporting the efforts of the European Commission to grant the least developed countries permanent tariff and quota-free access to the EU market. The Generalised Scheme of Preferences (GSP) is being used in this context: developing countries with a lower income are given preferential customs' access to the EU market. For trade to have a positive impact, countries also require development policy support. Consequently, since 2006, the BMEL has supported the WTO's "Standards and Trade Development Facility" (STDF).

Furthermore, the BMEL has given its backing to the inclusion of references to the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security (VGGT) in the EU's free-trade agreements. The principles for responsible investment in agriculture (RAI) will also be embedded in the agreements.



STANDARDS AND TRADE DEVELOPMENT FACILITY (STDF)

The STDF is a joint initiative of the World Bank, the World Trade Organisation (WTO), the World Organisation for Animal Health (OIE), the World Health Organisation (WHO) and the United Nations' Food and Agriculture Organisation (FAO). It helps developing countries to implement and comply with international standards on all aspects of animal health, plant protection and food safety. The STDF is currently supporting, for instance, efforts by the authorities in Cameroon to strengthen its control structures for cross-border animal diseases.

5

Digitalisation as an opportunity

Digital innovations can help to shape our future in a sustainable fashion. This is why the BMEL is backing the development of new solutions for food, arable farming, animal welfare and rural areas.



Protecting the climate and the environment, improving animal welfare, living healthily, cutting costs, facilitating work and fair management: digital solutions can make an important contribution to all these areas. Digitalisation also gives people in rural areas the chance to have equal living conditions and inclusion. But if everyone is to benefit from the positive impact of digital change, it must be embedded in the heart of society. It is necessary to involve all social groups and to inform them of the new opportunities. Ethical issues, including safety and working conditions, must also be taken into account. This is what the BMEL is advocating in its three areas of action:

AGRICULTURE



A drone scans a field to precisely deliver plant protection products exactly where they are needed. A tractor mechanically removes weeds without the use of plant protection products – and is guided by a satellite. The state of a pig's health is checked via a chip in its ear and the conditions in the animal sheds adjusted accordingly. These are all examples demonstrating how digitalised technology can make sustainable agriculture easier. The BMEL is promoting innovative ideas like this.

Digital trial fields in agricultural holdings and rural areas are an important component in such developments. For this and other projects, the BMEL made funding of 15 million euros available in 2019 alone, with a further 45 million euros planned up until 2022. The goal here is to determine how, with the help of digitalisation, on site conditions can be improved in a specific way. For instance, attention is being focused on how digital technologies can best be used in green jobs: to protect the environment, climate, animal welfare, biodiversity and to facilitate the work of farmers. In future, the BMEL will also focus more particularly on funding the development of innovative, competitive products and methods that offer resource-conserving solutions for crop production and animal husbandry.



RURAL AREAS

An empty building in a village is turned into a multi-functional building – with a village shop, cafe and post office and a space for events, outpatient care and free mobile workplaces equipped with WLAN; an internet platform markets regional products; volunteers create networks and services such as hairdressing, care and music lessons can be booked and organised online. Digital technologies can improve life and work in rural areas and thus ensure equality of living conditions. A precondition for this is the technical infrastructure.

The BMEL is promoting corresponding initiatives and projects that make people's lives in rural areas easier. With its Land.Digital (Rural.Digital) initiative, the BMEL is supporting projects across Germany in different areas: from health and care to training and education, from the economy and work to mobility. The call for project proposals met with a large response: 237 projects were submitted and over 60 were granted funding. With the new pilot Smarte LandRegionen (Smart Rural Regions) project, the BMEL wishes to drive digitalisation forward on the ground. In up to seven pilot regions, intelligent transferable solutions will be identified with the help of research and development to enable as many regions as possible in Germany to benefit equally from the new digital applications.

FOOD



Digital solutions can also help to bring about the more sustainable handling of food. An example of this is the digital “eco-platform” funded by the BMEL which helps companies from industry and trade to network with food banks and donate food by simplifying the recording of supply and demand data.

In 2019, a digitalisation category was added to the “Too good for the bin!” national awards. The award winners that year included the “Too good to go” app which enables consumers to purchase surplus or prepared food from restaurants and bakeries at reduced prices. The “Marktschwärmer” (market enthusiast) start-up was also nominated: it organises farmers' markets around Europe with an online order option which means only those products are harvested that are also sold. Another nominee was “noynum”, a prognostic system based on artificial intelligence that calculates sales forecasts for university catering and has already enabled more than 20 refectories to reduce their food waste.

Corresponding labelling helps consumers to recognise goods from sustainable production – for example, fair-trade cocoa. With digital technologies, this information can be transmitted in a more transparent and forgery-proof way. This is why the BMEL is exploring the extent to which traceability in the agricultural trade can be improved, for instance, by using blockchain technology.

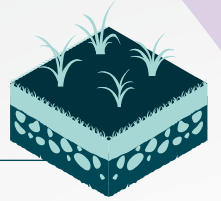
Through its Programme for Innovation Support, the BMEL will, in future, fund projects including those aiming to implement the intelligent networking of machinery and workflows in the food industry. In order to develop worker-friendly and user-friendly solutions, special attention must be paid to the labour force in various business segments.

AN OVERVIEW OF OUR GOALS

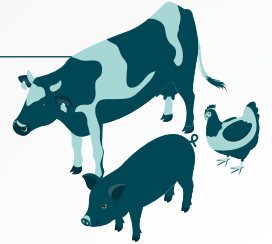
Food, agriculture, forestry, the fishing industry and rural areas: the BMEL advocates for sustainable development in all these sectors – on the national level and around the globe. Fully aligned with the 2030 Agenda, the BMEL is pursuing clear goals: for instance, safeguarding biodiversity, the fight against hunger and food waste, fair-trade conditions, living oceans and greater environmental and climate protection.

FOOD

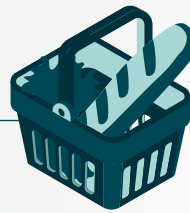
Fertile soils,
clean water,
healthy air



Improved animal welfare



Conscious
consumption



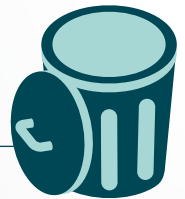
Balanced diets



No hunger



Less food waste



FINANCING

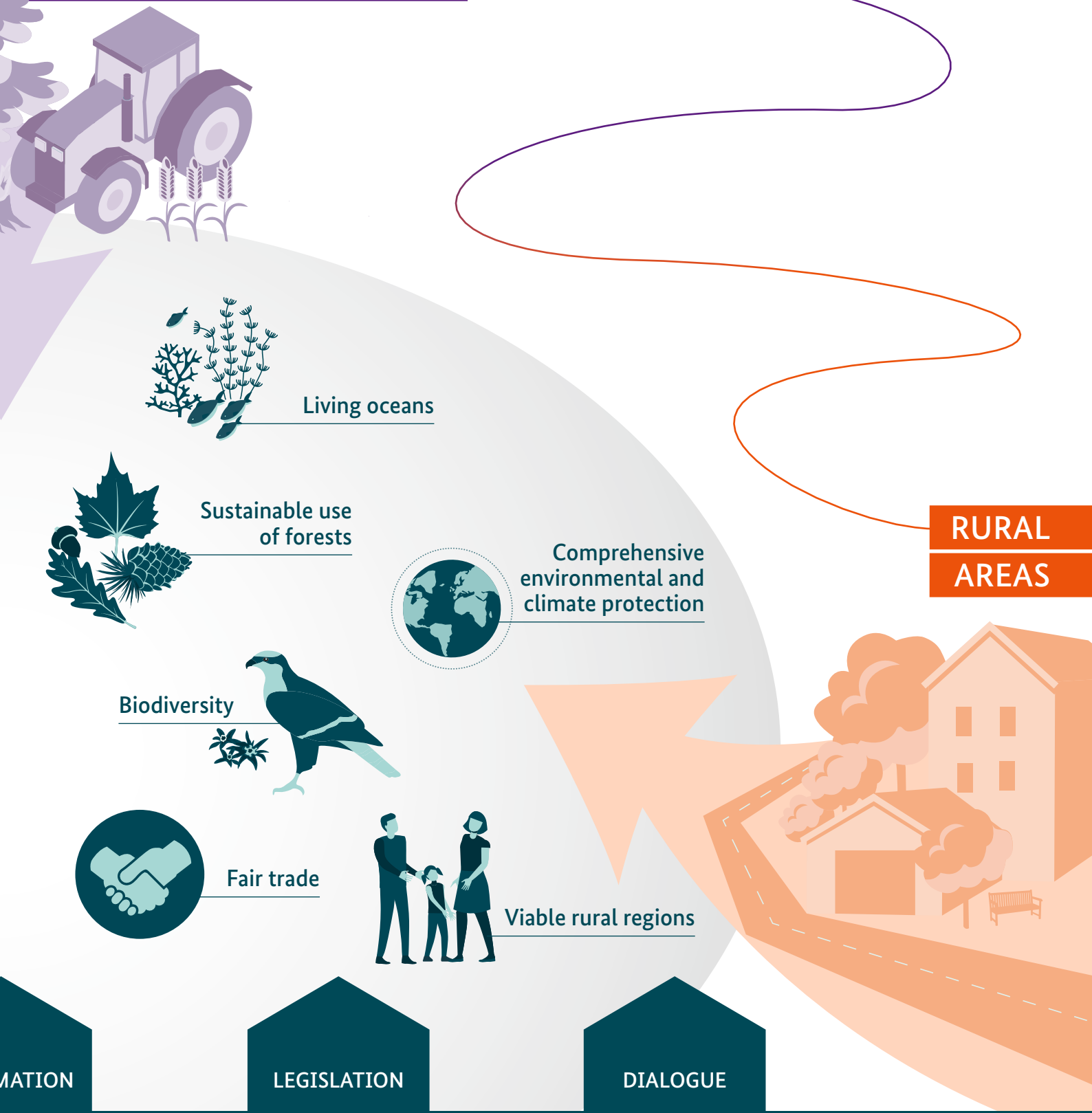
RESEARCH

INFORM

RESPONSIBLE POLICIES

Sustainable development is based on a series of complex interrelations. It can only be successfully implemented in a cooperative and interdisciplinary way. For example: measures being taken for climate protection and biodiversity also safeguard agricultural production and offer opportunities in rural areas. At the same time, sustainable development calls for the careful stewardship

AGRICULTURE, FORESTRY AND FISHERIES

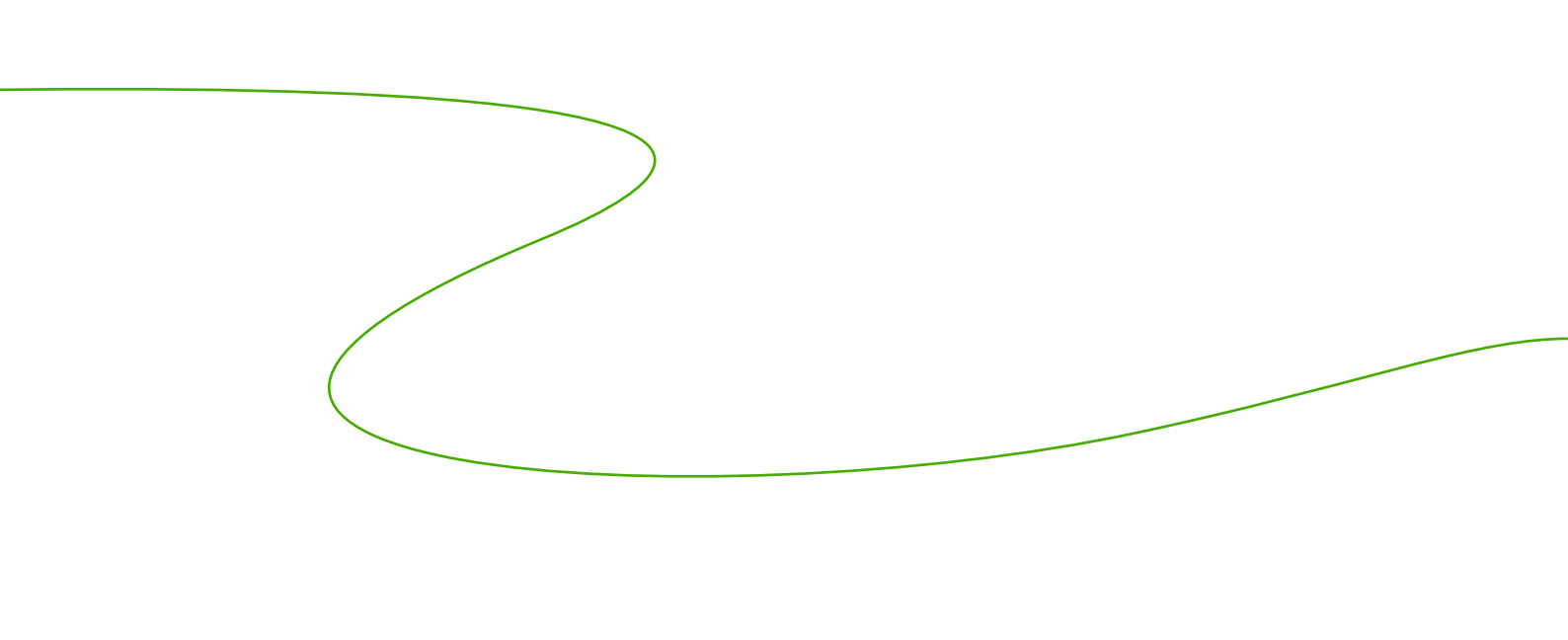


of resources and conscious consumption. It is the task of policy makers to create the preconditions for responsible actions. Within its spheres of competence, the BMEL is driving sustainable development forward in a strategic way – and is using diverse measures and instruments to do so. For instance, the BMEL is providing financial support for selected, forward-looking ventures and research projects. It is also drawing up national laws and is involved in cross-country decision-making processes and treaties in the EU and around the globe. Furthermore, the BMEL is promoting the transfer of knowledge, making a wealth of information available and engaging in a dialogue with different groups in society.



OUR ASPIRATION

Promoting sustainable development presents a complex challenge. It is about preserving the natural foundations of life, shaping economic relations in a stable manner and creating fair living conditions. The careful handling of the earth and its resources is the guiding principle behind all our political actions. Agriculture that works in an equally efficient and resource-saving manner around the world creates the preconditions for future generations to lead a good life too – both in rural areas and in the cities. For this, a holistic food system is required. Only by considering the entire value chain can we achieve sustainable consumption and production patterns from field to plate. This is our aspiration at the Federal Ministry of Food and Agriculture.



PUBLISHER

Federal Ministry of Food and
Agriculture (BMEL)
Division 521
10117 Berlin

PUBLISHED

May 2020

DESIGN

neues handeln AG

TEXT

BMEL

PRINTING

BMEL

PHOTO CREDITS

Front cover, inside front cover and back cover:

Christian Schwier/Adobe Stock;

P. 1: Steffen Kugler/Bundesregierung;

P. 4: myfoto7/Adobe Stock;

P. 8: Biletskiy Evgeniy/Adobe Stock;

P. 18: Hans Blossey/Alamy Stock Foto;

P. 22: Ildar Abulkhanov/Adobe Stock;

P. 28: ValentinValkov/Adobe Stock;

P. 32: Hans Blossey/Alamy Stock Photo

Printed on 100% recycled paper.

**This publication is made available free-of-charge
by the BMEL. It may not be used by political parties
or groups during an election campaign.**

Find out more at

www.bmel.de

 @bmel

 Lebensministerium

