Federal Ministry
of Food
and Agriculture

National Strategy for Food Waste Reduction

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Introduction

From an ethical, ecological and economic viewpoint, the reduction of food waste poses a challenge for all stakeholders: for policy-makers, economic operators, consumers, the scientific community and civil society.

More than 800 million people are starving across the globe: more than twice as many people are suffering from malnutrition or undernutrition.

The production of foodstuffs uses up valuable resources such as soil, water, energy and fuel and is associated with the emission of greenhouse gases. Food should therefore not be lost unnecessarily or wasted.

By adopting the United Nations 2030 Agenda for Sustainable Development, the international community committed itself to the goal of taking effective action against hunger and any form of malnutrition in this world (SDG 2) and substantially reducing food waste (SDG 12.3).

In Izmir, Turkey, in 2015, the G20 Ministers of Agriculture also declared their willingness to take action against food waste.

The European Commission takes the problem of food waste very seriously and, in cooperation with the Member States and interest groups, seeks ways to avoid food wastage and to shape the food supply chain in a sustainable manner. For instance, the reduction of food waste is an essential component of the new EU Circular Economy Package that deals with waste prevention and the conservation of resources.

The Federal Government, too, pursues the goals laid down in Agenda 2030. The Federal Government wants to achieve the aim of halving per-capita global food waste at the retail and consumer levels and reducing food losses along production and supply chains, including post-harvest losses, by 2030. What is crucial in this endeavour is for us all to combine our efforts.

The German Sustainable Development Strategy aims to include an indicator on food waste and losses in Germany.

In the 2018 Coalition Agreement, the ruling parties committed themselves to the goals agreed in Agenda 2030, such as Goal 12.3. This goal can be reached at national level only if all actors along the food supply chain are involved.

The National Strategy sets the framework for the process that is now following to jointly define **measures to avoid food waste** and achieve a change of mindset within society: greater appreciation of foodstuffs and of the resources needed for their production.

1

Context and challenge

The Waste Framework Directive was revised at European level. The revised EU waste legislation that was adopted on 30 May 2018 calls upon the Member States to take action to reduce food wastage at each stage of the food supply chain, monitor food waste levels and report on the progress achieved. Food waste is only defined and recorded as such after the harvest and after slaughter.

Food waste in Europe and Germany

For Germany, the scientific community calculated that there were 11 million tonnes of food waste per year [Hafner et al., 2012]. If food is not, as intended, used for human consumption, the resources used in its production may have then been used unnecessarily, with the climate being impacted. If food waste were reduced by 50%, greenhouse gas emissions could be cut in Germany by 6 million tonnes of CO_2 equivalents, according to an expert opinion by the Scientific Advisory Boards on Food, Agricultural and Forest Policies. Taking into consideration the emissions of all industries involved in the food sector and also the emissions generated abroad that are associated with the consumption of food in Germany, the cumulative product-related greenhouse gas emissions add up to 0.5 tonnes of CO_2 equivalents per inhabitant and year and to around 38 million tonnes of CO_2 equivalents for Germany as a whole [Jepsen und Vollmer 2016].

At present, data on food waste along the food supply chain is not sufficient to quantify how much individual sectors contribute to the total amount of waste. A cross-departmental indicator and methodological paper are currently being developed for data collection and evaluation, and to determine the success of reduction measures. A status quo analysis based on existing data from 2015 is being carried out using this method, and the data thus obtained are being used as a baseline for the strategy. The baseline data will be available in June 2019. Food wastage and the potential for reducing this wastage will then be able to be quantified by measuring and monitoring food waste.

Definitions

The strategy uses definitions and references to other legal provisions that were introduced in the revised legal provisions of Directive 2008/98/EC on Waste, last amended by Directive 2018/851/EU (Waste Framework Directive):

- **Food waste** is food that has become waste along the food supply chain, as defined by the Circular Economy Act. This includes food losses that arise after harvest, e.g. during storage, transportation, processing or production, and that fall within the definition of waste;
  - food shall be deemed to be waste if someone discards (has discarded) it, or intends or is required to discard it.
  - An addition to Article 2(2) of Directive 2008/98/EC by Directive 2018/851/EU stipulates that „substances that are destined for use as feed materials as defined in point (g) of Article 3(2) of Regulation (EC) No 767/2009 of the European Parliament and of the Council and that do not consist of or contain animal by-products“ shall be excluded from the scope of application of the Directive.
- With reference to Regulation (EC) No 178/2002, **food** means any substance or product, whether processed, partially processed or unprocessed, intended to be, or reasonably expected to be, ingested by humans.
  - This also includes beverages, chewing gum and any substance, including water, intentionally incorporated into the food during its manufacture, preparation or treatment.
  - Plants are classified as food only after the harvest and animals only after slaughter.

In view of the fact that losses are assumed to occur along the entire plant production chain, including harvest and post-harvest, it is not only the EU‘s waste policy that provides scope for reducing losses; the EU‘s Common Agricultural Policy (CAP) also has great potential for reducing losses prior to harvest and slaughter. This potential will, however, not be examined in greater detail under this strategy, as this strategy focuses on reducing food waste in order to reduce food wastage.

Where waste arises

Food waste is generated at all points of the food supply chain. We therefore also need an international effort as well as the approaches pursued at national and European level. The causes are complex and very diverse.

The table below shows an overview, broken down by sector, where food waste is generated and mentions possible causes without claiming to be exhaustive:

Sector	Possible causes of food waste
Primary production (after harvest or slaughter)	• Losses during transportation and storage • Overproduction, i.e. no sale on the market • Product and quality standards if no other use is possible
Processing of food	• Damage caused during production, packaging, interim storage or transportation • Contamination • Technical disturbances, e.g. malfunction in temperature control, faulty packaging, faulty marking or labelling, manufacturing defects (overweight or underweight in the case of ready-to-eat foodstuffs, wrong recipe) • Errors in quality management • Necessary samples and retained samples to furnish proof of the quality of delivered raw materials and processed products • Overproduction, planned sales not achieved • Failure to utilise scope in the sectoral guidelines on good hygiene practice for waste avoidance in food hygiene monitoring. • Returned goods from trade that can no longer be sold as food • Short duration of the best-before date
Wholesale and retail trade	• Inappropriate stock management characterised by excessively large order volumes and resulting in the products passing their best-before or use-by dates • Products no longer saleable or marketable due to damage or lack of freshness, e.g. through sub-optimal storage such as wrong temperatures caused inter alia by an interruption in the cold chain, or light • Damage to packaging, e.g. „air ingress“ • Inappropriate portioning of packages • Uncertainties about liability if food is passed on or donated • Legal aspects / deviation from commercial grades; product requirements; official order to destroy products due to labelling errors • Product recall due to violation of food law requirements
Away-from-home consumption: restaurants, catering etc.:	• Inappropriate purchases and meal planning, e.g. incorrect orders or too much food served at the serving counters • Lack of monitoring of surpluses • Legal aspects (e.g. hygiene guidelines) • Consumer behaviour (food tastes bad, portions are too large, no possibility of taking leftovers home) • Requirements changing at short notice (number of persons to be fed) • Rules governing the passing on of food and dishes from away-from-home consumption
Private households	• Failure to consider the durability of (fresh) food when shopping • Overly large quantities purchased, inappropriate planning, for instance too much is cooked or prepared • Overly large pack sizes (on the supply side) • Incorrect storage • Lack of domestic skills in the handling of food • Bad purchases (e.g. product does not taste nice) • Wrong preparation

Ongoing work

Federal Government

The *Too good for the bin!* initiative for greater appreciation of foodstuffs has been run by the Federal Ministry of Food and Agriculture (BMEL) since 2012 and informs consumers about the value of food, the causes of food wastage and options for reducing this wastage. This initiative is being expanded and is intended, in the future, to encompass all sectors of the food supply chain as mentioned above.

On the Internet platform www.lebensmittelwertschaetzen.de, the Federal Government and the federal states publish initiatives to fight food wastage, call on other actors to present their projects and thus also raise awareness of this subject.

The Federal Government currently makes available around EUR 16 million for research programmes that are aimed at reducing food wastage: for example on resource efficiency, food processing processes, smart packaging and on the disposal behaviour of consumers. The government promotes the development of digital solutions in order to improve the passing on of food to non-profit making organisations. Innovative measurement systems are funded to develop sustainable approaches, e.g. for recording food waste in away-from-home consumption.

In 2013, the federal government and the federal states worked together closely to adopt the Federal Government's Waste Prevention Programme for the first time. This programme is currently being revised and will be continued in 2019. Waste prevention and thus also the avoidance of food waste forms part of the general transition to a sustainable management of global resources.

Federal states (Länder)

The federal states and municipalities are important partners in the prevention of food waste. For instance, they are chiefly responsible for waste management and waste management consultancy. Numerous initiatives and activities are already in place in the federal states and in municipalities:

→ the avoidance of food waste has been enshrined in the waste management plan of eight federal states.

→ Actors are linked through „round tables" and in alliances.

→ Data on food waste is collected.

→ Knowledge is conveyed through information materials and at events.

→ Action plans are already helping to reduce food waste.

→ Awareness-raising activities are repeatedly carried out, particulary at municipal level, for instance during the European Week for Waste Reduction.

→ Research projects and innovations are being initiated.

Industry

The food industry is aware of its social responsibility. Many enterprises have for some years now incorporated food waste prevention in their in-house sustainability strategy with a view to minimising the waste. Precision farming is already used on some farmland, ensuring efficient and resource-conserving food production and thus contributing to resource preservation. Food constitutes the income basis of food business operators. From an economic point of view, the sector has an interest in preventing food waste as far as possible. Therefore food business operators from (primary) production, processing, trade and the catering trade are already working on solutions with a view to further reducing food wastage, inter alia through the following measures:

→ agricultural direct marketing, with the operators campaigning against food wastage directly via their contact with customers, e.g. by providing information on durability and further processing;

→ information on product packets and on the Internet regarding storage, preparation and the best-before and use-by dates;

→ use of modern, industrial production plants and resource-conserving production techniques to ensure that raw materials are utilised as far as possible;

→ use of merchandise management systems to coordinate quantity, quality and delivery time of raw materials and foodstuffs;

→ prevention of food waste as a goal in in-house sustainability strategies;

→ in-house staff training and continued training;

→ use of appropriate packaging to protect foodstuffs against spoilage and to facilitate storage;

- → provision of advice to consumers through service personnel and nutritionists on the markets, for instance on the proper storage of foodstuffs;
- → the possibility of customer-specific portioning at service counters or in the fresh produce areas of the retail trade where fruit, vegetables and baked goods are on offer;
- → projects to improve the temperature monitoring of the cold chain;
- → cooperation with and support of charitable organisations such as food banks and associations like Foodsharing through food donations;
- → the formation, by associations, trade and industry, of the „United Against Waste“ society which pro-actively helps reduce food wastage through different measures (e.g. development of a waste analysis tool in away-from-home consumption to precisely record waste data and identify the causes); and
- → the drawing up of guidance documents and checklists to prevent food waste in catering enterprises.

Civil society

Numerous associations and organisations help in ensuring that food that is no longer marketable but still fit for human consumption does not go to waste. Civil society initiatives and suitable media coverage have raised people‘s appreciation of foodstuffs, as, according to surveys conducted by the Gesellschaft für Konsumforschung, consumers now make more deliberate decisions on what they buy when shopping to reduce what they throw away [Hübsch, 2018].

Civil society organisations such as food banks, foodsharing, Welthungerhilfe, Bread for the World, provide people with food that would otherwise have been discarded via donation systems, internet platforms and public distribution points (fairTeiler).

Associations and organisations such as Slow Food Deutschland e.V., consumer advice centres or the German Rural Women Association have been actively engaged for many years in offering public days of action, educational events and information materials in order to provide consumers with dietary and day-to-day life skills in the handling of food, achieve greater appreciation of food and ultimately reduce food wastage.

Scientific community

Alongside innovations in private sector enterprises, research institutions are developing new methods and techniques to minimise food losses or to lay the foundations for doing so. Projects are being carried out in cooperation with practitioners in order to develop comprehensive accounting methods on the one hand and efficient measures on the other. Previous research activities have already recommended a number of packages of measures and options for action; a dialogue process is intended to translate these into practice.

At European and international levels, German research institutions are engaged in transnational cooperation projects. The European research network on sustainable food production and consumption (SUSFOOD) has been promoting practical research on sustainable food production and reduction of environmental strains and waste since 2010 and includes aspects of sustainable consumer behaviour and the improvement of the competitiveness of the European food industry.

It was decided in 2015 at the Meeting of Agriculture Chief Scientists of the G20 states (MACS-G20) that research and policy advice capacities should be pooled and an initiative to reduce food waste set up. Germany has taken the lead role and the Thünen Institute has been coordinating a global research network (global flw-research) since 2016. Here, enterprises and research institutions can look for partners and research activities and engage in networking.

There is a need for interdisciplinary research (social and natural scientists, agricultural economists) in all fields of the food supply chain in order to consider where and how food waste can be avoided and greater appreciation achieved. The Federal Government‘s support schemes are supplemented by Länder-funded projects and private sector research.

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Accepting the challenge

In view of the volumes of food waste along the food supply chain and the associated social, economic and ecological implications, it is essential to implement measures to reduce food wastage. The efforts must also focus on shaping the food supply chain in such a way as to prevent food waste from arising in the first place.

In order to advance the goal of substantially reducing food waste along the food supply chain and halving per-capita food waste at the retail and consumer levels by 2030, we can build on ongoing work and learn from experience.

Field of action 1 – Policy framework

Different bodies have been established for future cooperation (see Annex 1).

Federal Government/Länder bodies

The Federal Government/Länder working group that is already in place will be enlarged and will take on the tasks of an inter-ministerial and inter-state steering instrument. The body, which will be set up by the BMEL, will be responsible for evaluating the implementation process and will identify further fields of action during the process and set new priorities, as required.

It will serve to create a coherent policy framework and identify conflicts of objectives. In this regard, it must also be examined whether the legal framework that is in place (e.g. Circular Economy Act) suffices or whether further regulatory measures might be needed with regard to the economic impact on the companies concerned. It must be ensured that it is in line with European and global sustainability objectives.

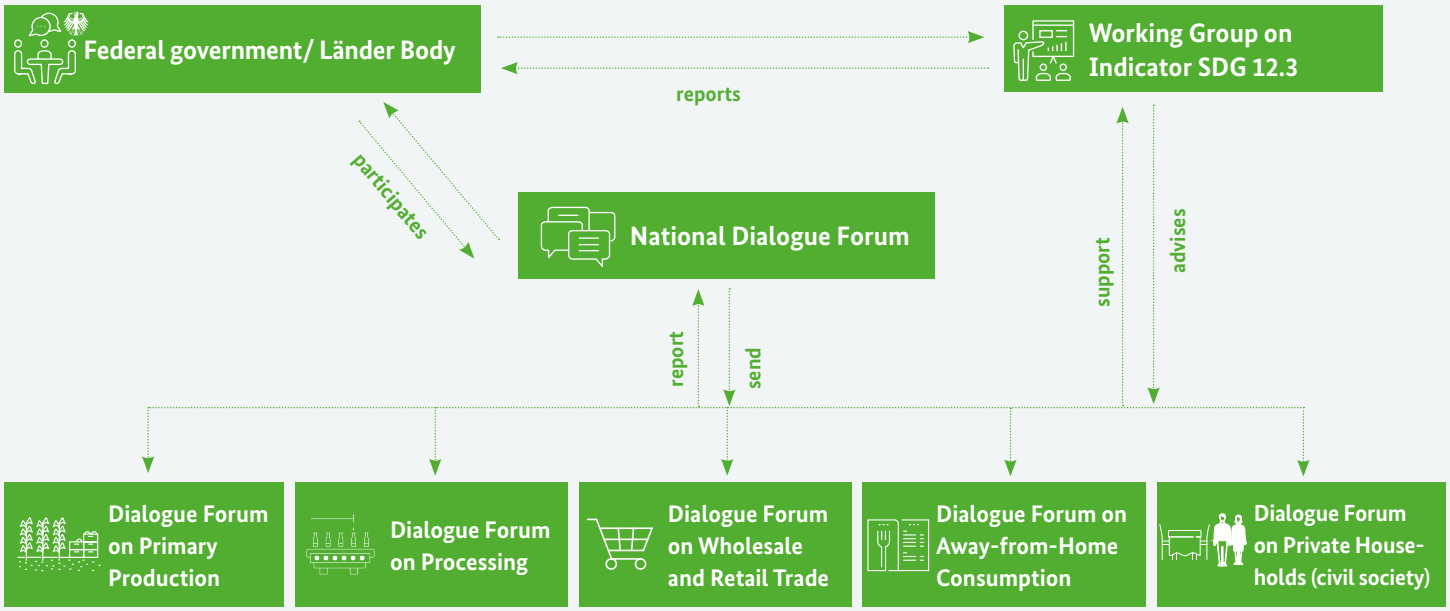
The joint body of the Federal Government and the Länder is intended to assess legislation with respect to obstacles and barriers, for instance in food donations, while aiming at uniform enforcement and handling of non-profit organisations across the Länder. This body will be able to discuss and develop support schemes for research and innovation and support instruments that assist both the Länder and the municipalities, especially the public waste management authorities, in the implementation.

Working Group Indicator SDG 12.3

Under the German Sustainable Development Strategy (DNS), an indicator is to be developed that would enable a quantification of food waste across all stages of the value-added chain and the furnishing of proof of success in reduction, hence making it visible. It is vital to improve data quality and availability quickly. Under the existing legal framework, with due regard both to existing data collection systems and to the avoidance of new bureaucratic burdens, especially for small- and medium-sized enterprises, food business operators assume responsibility and thus assist the necessary collection of data.

The inter-ministerial Working Group on Indicator SDG 12.3. consisting of BMEL, Thünen Institute (TI), the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), the Federal Environment Office (UBA) and the Federal Statistical Office (DESTATIS) are currently drawing up a methodological paper for the DNS indicator consistent with the deliberations at EU level. A status-quo analysis of the food waste levels based on existing data from 2015 (baseline) will be the starting point for

STRUCTURE FOR FUTURE COOPERATION



an agreement on targets for the respective sectors under the strategy.

The working group coordinates the reporting in the context of DNS, Agenda 2030 and the Waste Framework Directive to the European Union. It provides advice to the sector-specific dialogue fora on data collection and measuring, and it reports to the Federal Government/ Länder body.

National Dialogue Forum

In order to establish stakeholder networks and to report progress annually, a national dialogue forum for all stakeholders from the industry and civil society will be established by the BMEL in consultation with the ministries and Länder. The ministries and Länder are free to cooperate in the work of the forum. The National Dialogue Forum will dispatch representatives to the sector-specific dialogue fora. The sector-specific dialogue fora will report on progress in the National Dialogue Forum.

Dialogue fora per sector

Together with food manufacturers, civil society organisations, representatives from the competent ministries at Länder and federal level, as well as scientists, specific measures to reduce food waste are to be established in dialogue fora for each sector. The implementation of these voluntary measures is then to be made transparent. Targets are to be defined for the respective sectors and appropriate formats for the implementation and performance review to be agreed. In the process, the interests of small and medium-sized enterprises will be protected.

The dialogue fora are to assist the Working Group on Indicator SDG 12.3. by providing measurements made in practice in order to obtain a valid data base and to supplement existing data sources. The data will be analysed, with priority given to areas that have the greatest potential for reducing food waste. To ensure compliance with anti-trust and competition rules, it is necessary that the companies set possible targets themselves based on a voluntary commitment to prevent any restriction of trade.

Field of action 2 – Process optimisation in the industry

The improvement of existing corporate processes with a view to sustainable development is a key element of Agenda 2030 (SDG 12: ensuring sustainable consumption and production patterns) and meets the requirements of responsible corporate governance. This includes measures to prevent food waste and should encompass the handling of agricultural commodities and products from developing and emerging countries. The objective is to lower costs in the different sectors along the food supply chain by preventing food waste and to achieve a more sustainable use of resources, e.g. through the following measures taken independently by companies:

- → Analysis of production processes in order to determine where food waste arises and measures can be deployed.
- → Regular monitoring and adapting of business processes in order to minimise food waste during production and transportation.
- → Promotion of innovations that improve processes with respect to waste reduction and acceleration of their implementation in practice.
- → Incorporation of action against food waste into routine corporate activities.
- → Consideration of measures to prevent food waste through innovative logistic systems, e.g. needs-based order volumes, more flexible (more frequent) delivery of goods and a redistribution of goods between branches or price adjustments.
- → Analysis of the interfaces between the sectors and development and implementation of cross-sectoral measures in the dialogue fora.
- → Enhancement of transparency along the food supply chain via the provision of data on the recording of food waste in consensus with the actors of the food supply chain.
- → Examination of inclusion of relevant interest groups and options for cooperation.

→ Review of marketing and advertising claims with regard to their impact on the appreciation of food and the associated food wastage.

Field of action 3 – Changes in the behaviour of all actors

A key component for behavioural changes is to provide information on the benefits, to each individual and to society as a whole, that result from food waste reduction and greater appreciation of foodstuffs.

→ The BMEL's *Too good for the bin!* initiative will be further developed to become the umbrella brand for communicating the National Strategy for the whole food supply chain.

→ Social media such as Instagram, Twitter and Facebook are increasingly used in communication, particularly in order to reach adolescents and young adults.

→ Food business operators are called upon to continue to integrate the subject into initial and further training schemes, raise the awareness of staff and customers regarding food wastage and increase know-how on how to prevent food waste.

→ Schools and day-care centres for children are integrating the subject into educational materials (education and training curricula, project work) on sensitising and raising the awareness of children, adolescents and young adults.

→ Training of teaching staff and development of proposals for materials and methods for all federal states in order to integrate the subject of food appreciation into curricula.

→ Evaluation of the application, acceptance and effectiveness of teaching material in order to develop it further, as appropriate.

→ Successful activities and projects run by the federal states will be continued.

Field of action 4 – Potential arising from research and the digital transformation

In our modern, diverse living environment, innovative and digital solutions to complex logistical distribution tasks are one of the possible avenues to reduce food wastage.

Digital innovations should be analysed with regard to their benefits within the food supply chain, from primary produce right up to the consumers. The high transparency, decentralised data networks, swift data availability and traceability aspect should also be used to reduce food wastage.

1 ***Political framework***
Focus: Generation of various committees for future cooperation

2 ***Process optimisation in the economy***
Focus: Improving of existing business processes

3 ***Behavioural change among all actors***
Focus: Publicising the benefits of reducing food waste

4 ***Potential through research and digitisation***
Focus: Development of innovative, digital solutions for complex logistics distribution

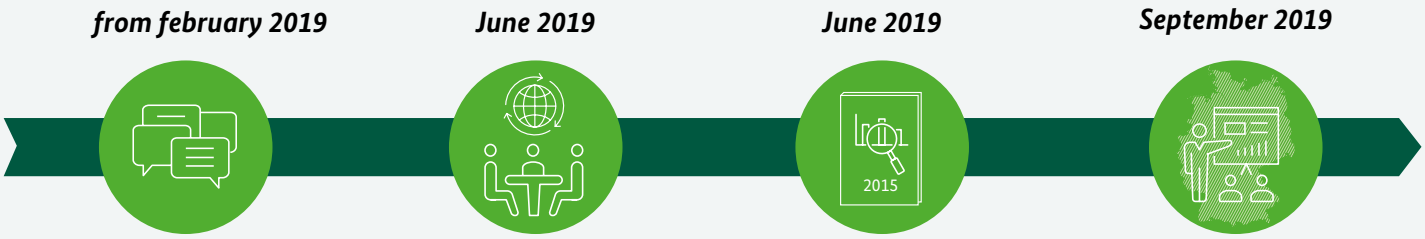
The BMEL intends, potentially under its innovation programme, to promote a project run by Tafel Deutschland e.V. (German Association of Food Banks) that is designed to improve the delivery system between trade and the food banks with the help of digital technologies. Digital solutions for the delivery system are intended to enable the identification of other partners among food producers, farmers and in away-from-home consumption to cut food wastage through the passing on of food to people in need.

Digital approaches are becoming much more important in international cooperation. The Federal Ministry for Economic Cooperation and Development (BMZ) intends to promote digital solutions, especially on the traceability of food, and better data management along the food supply chain.

Smart packaging that clearly indicates the fitness for human consumption and safety of food is intended to be swiftly developed into a marketable commodity and tested in practice with regard to its actual contribution to reducing food waste. The BMEL uses its innovation programme to promote suitable research projects that also address challenging questions, e.g. on the sustainable production of such packaging. As part of the socio-ecological research in the REFOWAS project (Pathways to reduce food waste), the BMBF (Federal Ministry of Education and Research) promotes the development of digital approaches to the prevention of food waste. For instance, the REFOWAS project uses software-based systems to provide forecasts of demand for small-and medium-sized bakeries, enabling production levels to be tailored to requirements and the volume of returned goods to be reduced. Digital measurement systems to record food waste are used in the hotel and restaurant industry. The kitchen monitor developed by REFOWAS enables kitchens and catering establishments to independently analyse the waste they generate.

A network such as this should also be strengthened at national level, just as with the global research network (global-flw-research), which is aimed at pooling research capacities and collecting research projects and expert profiles. The German-speaking „essens-wert“ network to prevent food waste has already laid foundations in this regard. The objective of this network is to enable a scientific exchange on the issue of food waste, to promote joint research activities and to communicate research results effectively to the public.

PROCESS FOR REDUCING FOOD WASTE



- Extension on the initiative *too good for the bin*
- Continuous information and documentation of implementation
- Joint committee of the Federal Government and the Länder takes over the cross-departmental and transnational steering

3

The way forward

A substantial reduction of food waste along the entire food supply chain in Germany by 2030 will require a concerted effort that is backed up by consistent coordination on the part of the Federal Government with a clear-cut National Strategy. The Strategy will be reviewed five years after its adoption by the Federal Government.

Each one of us has a role to play

Everybody should show due appreciation for our foodstuffs in everyday life. To be successful in the four fields of action, everybody – citizens, entrepreneurs, scientists and policy-makers – must do their bit and assume responsibility. The aim is to:

→ work together to achieve the joint objectives;

→ be innovative to find solutions;

→ show appreciation for foodstuffs;

→ conserve resources in order to sustain the planet; and

→ share freely available knowledge and data to make better informed decisions.

The Federal Government and the Länder governments are assisting the process by facilitating communication and cooperation between the actors in Germany through dialogue platforms. These platforms raise the awareness of consumers and actors along the food supply chain regarding food wastage, share freely available knowledge and data and support the implementation of measures.

Food businesses are best placed to find practical solutions for companies, determine areas with market potential and identify options for efficiency gains to reduce food waste along the food supply chain. They play an important role in implementing the strategy.

Researchers help to understand where and how much food is being wasted from farm to fork. What is particularly important here is practical applied research with practitioners acting as partners. The research community can use evaluation matrices to take account of and map resource use, climate and environmental strains, monetary determinants and avoidance costs.

Civil society, organisations and associations play an important role in saving and distributing food as well as in education and the raising of awareness through activities and campaigns.

Consistent policy as key

The Strategy's implementation process is intended to be launched in the first quarter of 2019 by involving all stakeholders in the development of measures and the definition of sectoral targets:

→ in February, the dialogue forum on away-from-home consumption will start with a kick-off event.

→ Other dialogue fora will be set up in the course of the year. The members of the dialogue fora will develop concrete measures during the dialogue processes and will define targets for each sector.

→ In the context of REFOWAS project (BMBF), an international scientific workshop for a harmonised description of methods will be held at the BMEL in mid-June and a national workshop with Länder representatives to coordinate data collection and measures to prevent food waste will be held at the BMBF in September.

→ The Thünen Institute will identify the baseline for 2015 based on the method determined by the Working Group on Indicator SDG 12.3 by the end of June. It will constitute the starting point for an assessment of progress and for continuous monitoring.

→ The Federal Government/Länder body will take up its duties.

→ *Too good for the bin!* will be expanded into an umbrella brand for communication and is a key element in the strategy to reduce food wastage.

→ The implementation process will be documented on the strategy's website www.lebensmittelwertschaetzen.de. The annual reports of the National Dialogue Forum will be posted on this website.

→ Successful activities and projects run by the Länder will be continued.

The measures derived from the strategy will be funded from the applicable budget estimates of the respective budgetary sections.

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Further information - collection of links

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  Gutes Essen ohne Reste – Wertschätzung für Lebensmittel, Baden-Württemberg

- → ***www.stmelf.bayern.de/wir-retten-lebensmittel***
  Bündnis „Wir retten Lebensmittel!“, Bayern

- → ***www.kuechenmonitor.de***
  Speiseabfälle messen und auswerten, Verbraucherzentrale Nordrhein-Westfalen

- ***www.essens-wert.net/***
  German-speaking network on food waste prevention

- ***www.tafel.de/***
  Food donations, Tafel Deutschland e.V.

- ***www.slowfood.de/***
  Slow Food Deutschland e. V.

- ***www.foodsharing.de/***
  foodsharing – Rette mit!

- ***www.wwf.de/themen-projekte/landwirtschaft/ernaehrung-konsum/***
  WWF Germany – Nutrition and consumption as topics

- ***www.united-against-waste.de/***
  United against food waste – an initiative of the food sector

- ***www.lebensmittelwertschaetzen.de/***
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  The „*Too good for the bin!*“ initiative, BMEL

- ***www.kern.bayern.de/wissenschaft/172184/index.php***
  Food saving projects at the Competence Center for Nutrition (KErn), Bavaria

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  Reduce Food Waste – Ways to reduce food waste – measures, evaluation frameworks and analysis tools, BMBF Forschungsprojekt

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  Food Losses and Food Waste – A global platform for experts and research, MACS-G20

- ***www.champions123.org/***
  A unique coalition of executives from governments, businesses, international organizations, research institutions, and civil society dedicated to inspiring ambition, mobilizing action, and accelerating progress toward achieving SDG Target 12.3

- ***www.flwprotocol.org/***
  Food Loss Waste Protocol – multi-stakeholder partnership, which has developed the global Food Loss and Waste Accounting and Reporting Standard – also known simply as the FLW Standard

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Bundesministerium für Ernährung
und Landwirtschaft (BMEL)
Referat 216 – Nachhaltige Ernährung,
Reduzierung von Lebensmittelverschwendung
Wilhelmstraße 54
10117 Berlin

STAND
Februar 2019

GESTALTUNG
neues handeln AG

TEXT
BMEL, Referat 216

DRUCK
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