A world without hunger is possible

Germany’s development policy response
“GERMANY HAS PLAYED A MAJOR ROLE IN PUTTING SUSTAINABLE EFFORTS AGAINST HUNGER ON THE INTERNATIONAL AGENDA. AT THE INITIATIVE OF THE BMZ, THE G7 COUNTRIES AGREED IN 2015 THAT THEY WOULD WORK WITH PARTNER COUNTRIES TO LIFT 500 MILLION PEOPLE OUT OF HUNGER AND MALNUTRITION BY 2030.”

German Development Minister Gerd Müller
DEAR READERS,

No human right is violated more frequently than the human right to food. There are still 795 million hungry people in the world. Two billion people are malnourished. Their diets are not balanced enough and contain too few vital nutrients for them to lead good, healthy lives. Hunger is not just the biggest risk to people’s health, it is also one of the biggest obstacles to development. Hunger can lead to displacement and increases hopelessness and violence.

A world without hunger is possible. The Federal Ministry for Economic Cooperation and Development (BMZ) wants to play a big part in achieving that goal. We have made the eradication of hunger and malnutrition a special priority, and we are committed to living up to this task through a special effort: our special initiative One World – No Hunger. Through that special initiative, the BMZ is investing some 1.5 billion euros a year in food security and rural development.

The main cause of hunger is poverty. So fighting hunger always means fighting poverty. Poverty is what stops people from being able to buy sufficient healthy food and using their natural resources sustainably. Most poor people live in rural areas. Smallholders contribute significantly to the production of food. Agriculture and rural development are thus of key importance for the reduction of poverty and hunger. Agricultural and rural development helps create jobs, income and a better outlook for people in rural areas.

Germany has played a major role in putting sustainable efforts against hunger on the international agenda. At the initiative of the BMZ, the G7 agreed at Elmau in 2015 that they would work with partner countries to lift 500 million people out of hunger and malnutrition by 2030, and that they would address the causes of hunger. The G7 are thus sending a strong signal to the international community.

By adopting the 2030 Agenda with its Sustainable Development Goals, the international community agreed to pursue a big transformation. Goal 2 – end hunger and all forms of malnutrition by 2030 – is of key importance. If it is reached, this will also help achieve other development goals.

The eradication of hunger and malnutrition requires a big effort on the part of many players. That is why the BMZ is bringing together important actors from civil society, the private sector, academia and the political arena in order to tap their knowledge and experience in pursuit of that common goal. Through its special initiative One World – No Hunger, the BMZ is doing its part to help ensure that a growing world population will be able to enjoy food and nutrition security.

I would like to invite you to join us in our efforts to eradicate hunger.

Dr. Gerd Müller
Member of the German Parliament
Federal Minister for Economic Cooperation and Development
For further information, go to our web app
www.bmz.de/webapps/hunger/#/en/
Contents

HUNGER AND MALNUTRITION: CURRENT SITUATION 4
Malnutrition: “hidden” hunger 5
Special initiative One World – No Hunger 8
Local impact of German development cooperation programs 10

WORKING FOR FOOD SECURITY, ENHANCING RESILIENCE 12
Program “Food and nutrition security, enhanced resilience” 13
Example from Malawi 14
Example from Cambodia 15

FOSTERING INNOVATION 16
Green innovation centers – new ideas from farm to table 17
Saving food: promoting health, preventing loss 18
Example from Kenya 19

CREATING PROSPECTS FOR THE FUTURE 20
Comprehensive support for rural transformation processes 21
Example from Tunisia 22
Example from Benin 23

PROTECTING NATURAL RESOURCES 24
Program “Soil protection and rehabilitation for food security” 26
Example from Ethiopia 27

PROTECTING FISHING GROUNDS 28
Encouraging sustainable fisheries and aquaculture 30
Example from Mauritania 31

SECURING ACCESS TO LAND 32
Secure tenure 34
Example from Namibia 35

ACCEPTING OUR RESPONSIBILITY – SUSTAINABLE CONSUMPTION 36
Hunger and malnutrition: current situation
Every day, some 8,500 children die from the consequences of hunger and malnutrition – this factor accounts for one in two deaths of children worldwide. Hunger is not just the biggest risk to people’s health, it is also one of the biggest obstacles to development. It contributes to displacement and increases hopelessness and violence. Where hunger prevails, productivity and economic potential dwindle and people find it harder and harder to lift themselves out of this situation on the strength of their own efforts.

LACK OF CALORIES AND NUTRIENTS

According to the United Nations definition, a person is undernourished if he or she is unable to consume enough food to maintain body weight and support light activity. The amount of food needed by an individual depends on his or her height, age, sex, type of work, and the climatic environment. According to the World Food Programme, the average person requires 2,100 kilocalories per day. If a person’s daily intake is less than 1,400 kilocalories, he or she is considered to be extremely undernourished and suffering from chronic hunger.

If a person does not have enough food, this does not only mean a lack of calories but also a lack of vitamins, micronutrients and other important nutrients. If a pregnant woman suffers from hunger or does not get enough nutrients due to an imbalanced diet, there are negative effects for the child both before and after birth. The first 1,000 days after conception are decisive for a child’s physical and mental development. In adults, hunger and malnutrition diminish people’s ability to work and may weaken their immune system to such an extent that an illness that is basically harmless may actually become lethal. Every day, thousands of people die from undernutrition and malnutrition, more than half of them children.

MALNUTRITION: “HIDDEN” HUNGER

Day by day, many people in developing countries have little to eat but rice, maize or wheat. While this imbalanced diet provides energy, it lacks vitamins, minerals, micronutrients, essential fatty acids, and proteins. This type of malnutrition is called “hidden hunger.” According to estimates, this affects one third of the global population.

In the long term, “hidden” hunger, too, is dangerous. It weakens people and makes them more susceptible to illness. And, in turn, children and people who are sick, for example people who have been infected with HIV, need a balanced diet to strengthen their immune systems. For example, a lack of iodine intake during pregnancy is one of the main causes of mental disabilities in children. And 140 million children worldwide have gone blind because of a lack of vitamin A.

If a person’s daily intake is less than 1,400 kilocalories, he or she is considered to be extremely undernourished and suffering from chronic hunger.

2,100 kcal

According to the World Food Programme, the average person requires 2,100 kilocalories per day.
FOCUS ON RURAL REGIONS

For many years, too little money was invested in agriculture and in rural development. Now our full commitment is needed to work with local people to invest more in the advancement of rural regions.

HUNGER IS UNEVENLY DISTRIBUTED

Experts are positive that enough food is currently being produced worldwide to feed all people on Earth. But the distribution of food is extremely uneven – and so is, thus, the distribution of hunger. Most hungry people live in South and Southeast Asia. The share of hungry people in the population is largest in sub-Saharan Africa, where hunger affects almost one in four people.

The main cause of hunger and malnutrition is not a lack of available food, it is mainly poverty. People just do not have enough money to buy nutritious food.

FOCUS ON RURAL REGIONS

Hunger is primarily a rural phenomenon. Some 70 per cent of all hungry people live in rural areas – in the places where food is grown. They are simply too poor to buy food, or there is a lack of affordable food in their region.

Millions of smallholder families, pastoralists, fishermen and day laborers often make barely enough to get by. And they have even less income if they are hit by a natural disaster, an epidemic or a political crisis, or if their livelihood is destroyed as a result of the overexploitation of natural resources or through violent conflict. The consequences of climate change, for example extreme weather events and the aridification of land, too, can throw people into poverty and hunger.

Often, rural hunger and poverty have structural causes. For many years, too little money was invested in agriculture and in rural development. African governments have realized this and have made a commitment to invest at least 10 per cent of public resources in agriculture every year (2014 Malabo Declaration). What is needed in addition
to a sustainable, productive agricultural sector is education and health, roads and warehouses, energy and water, and also support for the development of skilled trades, trade and business. It is important that agricultural goods are processed in the developing countries themselves, with a view to creating jobs and income opportunities.

A vast range of measures can, and must, be pursued in this connection – from adjusting the policy environment all the way to giving farmers the knowledge they need for sustainable farming, because the pressure on rural areas and especially on small-scale farming is growing. It is expected that, by 2050, there will be more than nine billion people on Earth – most of them in developing and emerging economies. Experts estimate that, in order to ensure food security for them all, agricultural production will have to rise by at least 60 per cent by 2050.

“It used to be that our harvest was just barely enough for us to get by. Ever since we started to grow a new type of sweet potato that is richer in vitamins, we have been better off. This sweet potato sells better in the market and we are making more money. Finally, all my grandchildren are able to go to school.”

JOSEPHINE MUCHELE (50)
SMALL FARMER IN WESTERN KENYA
With its special initiative One World – No Hunger, the BMZ has made the fight against undernutrition and malnutrition one of its key concerns. The purpose of the special initiative is to overcome hunger and malnutrition among current generations and simultaneously work with the BMZ’s partner countries to put in place the basis for food security for future generations, too, even as the world population continues to grow.

This requires efforts by all players within society: policymakers, civil society, academia, religious communities and the private sector.
WORKING IN PARTNERSHIP

Growth in the agricultural sector and food security are integral elements of the economic and agricultural policies pursued by the BMZ’s partner countries. The special initiative One World – No Hunger builds on this. The BMZ assists its partners at a variety of levels in making their rural development policies sustainable. In Africa, one important continent-wide program is the African Union’s Comprehensive Africa Agriculture Development Programme (CAADP). It is clear from the 2030 Agenda and from the Elmau G7 decisions that the goal of lifting 500 million people out of hunger and malnutrition by 2030 can only be reached by working with all relevant partner governments and international organizations, and by pursuing a broad approach.

FOCUS ON SMALL FARMERS

One focus of the special initiative is to strengthen small farms. This sector offers the greatest potential for producing enough food for a growing world population, as the majority of farms in developing countries are small farms. Most of them are still using simple methods and have not yet adopted modern techniques. So a lot can be done here in terms of increasing yields and reducing poverty. Women play a key role for food security and for agricultural production and processing.

If a poor smallholder family is able to harvest and sell more produce, this does not only help the family itself. There is also more food on the market – a step toward better food security. It is important to farm in such a way as to preserve soil fertility and water resources, so that harvesting will remain possible on a long-term basis. Sustainability is a must. This is the only way in which food security can be ensured for a growing world population.

This is why Germany is pursuing its special initiative One World – No Hunger to help developing countries and emerging economies build sustainable agricultural sectors and strengthen their rural regions.
A world without hunger is possible.
Local impact of German development cooperation programs

Through its special initiative One World – No Hunger, the BMZ is investing some 1.5 billion euros a year in food security and rural development.

1.5 billion

4,000
Some 4,000 people have so far taken part in trainings and workshops in Tunisia. Seven value chain platforms are developing joint projects in the areas of production, processing and marketing.

more than 60,000
Over the last 20 years, 166,000 hectares of land have already been restored in Ethiopia and are now being farmed sustainably. This has benefited more than 60,000 small farmers through significantly higher yields. Yields have gone up by almost 40 per cent for milk and by as much as three quarters for wheat.
More than 30,000 women have professionalized the way they make and sell shea butter, thus significantly increasing their incomes. This has changed the lives of their families. Many now invest in growing food crops such as maize, rice and soy. Some are sending their children to university. Other women’s groups are producing parboiled rice or tofu.

Mentors in Namibia have so far counseled more than 10,000 new farmers and smallholder families.

Farmers in Madagascar have been able to increase their incomes by 24 per cent on average. Since 2012, more than 400 of them have been selling organic, fair-trade vanilla.

By early 2015, some nine million hectares of land had been distributed to landless and disadvantaged people in Namibia. More than 85,000 people received land titles, some 40 per cent of them women.
Working for food security, enhancing resilience
There are two billion people who do not have access to the food they need for a balanced diet with all the necessary micronutrients. This primarily affects women – especially pregnant women and nursing mothers – and young children. As a result, they have a poorer chance of staying mentally and physically fit. One of the goals that the international community is committed to reach by 2030 is to make sure that they, too, will have sufficient and nutritious food on a lasting basis.

WORKING FOR FOOD SECURITY

Eradicating undernutrition and malnutrition in mothers and young children is the most effective investment in the future, because a healthy diet in the first 1,000 days in the life of a child, counting from conception, is decisive for that child’s entire life. But it is not enough to give people access to sufficient calories and nutrients. For a healthy diet, people also need to know about food hygiene and how to use, store and prepare food. Access to safe drinking water, health care and social protection is also essential.

MAKING PEOPLE RESILIENT TO CRISIS

Many people who are suffering from malnutrition are living in regions that have been affected by a violent conflict or a natural disaster. Factors such as climate change, dwindling natural resources and unclear land rights exacerbate the situation. It is often the most vulnerable – women and young children – who are hardest hit by such crises, with particularly severe threats to their food security. In order to make sure that such groups, but also all other people in a vulnerable region, enjoy food and nutrition security, their resilience must be strengthened – in other words, their ability to cope with crises.

When a drought or an armed conflict occurs, it is not only vital to quickly provide food aid, cash or vouchers directly to the people affected. There is also a need for medium- and long-term measures in which the stakeholders have a say. This may include preventive health care and health education, but also efforts to assist with the recovery of agriculture. In that context, it is especially important to protect soil, forest and water resources, as they tend to be severely overexploited in times of crisis. If a large number of mutually integrated measures are undertaken, stable systems can emerge that help to ensure food security on a long-term basis.

PROGRAM “FOOD AND NUTRITION SECURITY, ENHANCED RESILIENCE”

The program “Food and nutrition security, enhanced resilience” is part of the special initiative One World No Hunger. Under this program, activities are being carried out in eleven countries. The focus is on sub-Saharan Africa and Asia, because the food situation of women and young children is particularly precarious in those regions. The program is based on a mix of many different activities, including advice on how to diversify agricultural production, education on balanced diets and hygiene, improvement of health services, and the incorporation of successful activities in national strategies. The program is intended to help improve the food situation and hunger crisis resilience of up to two million people.
In Malawi, children are taking part in a project teaching them about a balanced and healthy diet. There are also education courses for their parents.

Example from Malawi

IMPROVING THE FOOD SITUATION OF WOMEN AND PRESCHOOL AND PRIMARY SCHOOL CHILDREN

In Malawi, the diets of many people in rural areas are primarily based on maize. While maize is good for filling people up, it does not have enough nutrients and micronutrients. Such an imbalanced diet leads to deficiency syndromes with severe consequences. Malnourished children suffer permanent damage in terms of their physical and mental development. Almost one in two children in Malawi is affected by this type of malnutrition. Malnutrition is also widespread among pregnant women and mothers. This is not only a severe problem for the children and their families but also for Malawi’s economic development. Malawi is one of the world’s least developed countries.

The districts of Dedza and Salima are particularly hard hit. The BMZ is working in these districts to improve the food situation of women and children. Food habits cannot be changed overnight. The activities therefore address several levels. Health workers advise mothers and pregnant women on how to improve the nutrition of their families. Agricultural extension officers teach them how to grow a variety of fruit, tubers and pulses. There are cooking classes where the women learn to use local food for a varied, balanced diet. Primary schools, too, educate pupils about food and nutrition issues, and support is being given to the schools so they can provide the children with nutritious meals. The program also includes counseling on health and hygiene issues.

Over the next two years, it will benefit 15,000 mothers and 25,000 children of preschool and primary school age. A more balanced diet will improve the development of many children – and, thus, the future of an entire region.
Example from Cambodia

COOKING CLASSES AND NEW LATRINES AGAINST MALNUTRITION

Cambodia is still feeling the consequences of decades of war. The country is also considered to be highly vulnerable to climate change. The situation is especially precarious in the country’s poor northwestern region, where one in three children under five suffers from chronic malnutrition. This is not only due to poverty and a lack of food. What is also lacking is knowledge about balanced diets – and safe drinking water and latrines, as well as fundamental things such as the chance to wash one’s hands with soap. These factors contribute to the spread of diarrheal diseases and worms, which are the most common causes of malnutrition in children.

With support from the BMZ, Malteser International, an aid organization, is currently working in Cambodia to improve the nutrition of more than 10,000 women, 3,500 under-five-year-olds and more than 2,000 schoolchildren. Workers are addressing several aspects at once in order to tackle the problems. Village health assistants have been trained to teach pregnant women and young mothers in 50 villages about a balanced diet and the causes of malnutrition and undernutrition. They tell them how important it is that babies are exclusively breastfed for the first six months of their lives, and they offer classes to teach mothers how to cook for their infants. The children are weighed and measured regularly.

In order to make people’s diets more balanced, more than 700 family vegetable gardens have already been set up. Smallholder families are being supported in starting poultry or aquaculture farming so they can produce food that is high in protein. Many families are now able to produce a surplus they can sell, which improves their household incomes.

In parallel, support is being provided to families in 20 villages as they build hygienic latrines and gain access to safe drinking water. Education campaigns teach them about the links between hygiene, sanitation, health and nutrition. At school, children learn about the importance of handwashing, and handwashing stations are being set up.
Fostering innovation
For the world population to be able to feed itself in 2050, the amount of food produced worldwide will have to rise by 60 per cent. For many developing countries and emerging economies, this means that their agricultural sectors have to become more productive and sustainable.

Climate change is having an impact on agriculture. If countries manage to adapt their agricultural sectors to extreme weather events such as droughts and heavy rain, productivity can rise again in many countries.

LEAVING ROUTINE BEHIND:
INNOVATIVE KNOWLEDGE FOR MANY

When land dries up and populations grow rapidly, when fuel becomes scarce and pests wreak havoc, traditional answers often begin to fail. New ideas can help meet the many and complex challenges.

Innovation is a process through which small farmers change their routines – be it by introducing new varieties, more professional methods and production procedures and new forms of marketing or by changing cooperation patterns along the value chain between traders, producers and processing companies.

Access to knowledge is of key importance in this connection. For a long time now, it has no longer been the increased use of fertilizer and water or the cultivation of larger areas of land that has made the crucial difference, but the knowledge about how to use such resources efficiently and effectively. As many farmers as possible should benefit from successful methods to increase their harvests, improve the fertility of their land, save their crops from mold and reduce their consumption of wood, for example.

It is important to partner with public agricultural research institutions, because productivity and income gains can be generated wherever new research findings on improved varieties and production methods are disseminated on a broad basis through training and extension. For example, the use of drought-resistant varieties of grain often leads to more stable harvests.

And in many places, the small farmers themselves come up with innovative ideas to meet the challenges they encounter in their day-to-day work. What matters is to find out about such ideas and to disseminate them. This, too, is being fostered by the green innovation centers.

GREEN INNOVATION CENTERS – NEW IDEAS FROM FARM TO TABLE

Germany is helping to establish 13 green innovation centers for the agriculture and food sector, twelve in Africa and one in India. The aim is to sustainably increase productivity and incomes, to create new jobs and to improve local food supplies through innovation. The centers will contribute to comprehensive and sustainable development across the entire agro-food sector from farm to table. All aspects are important, from cultivation, harvesting methods and storage to transport, processing and marketing. The green innovation centers are able to draw on the expertise of German and local civil society, of research and academic institutions and of the private sector and business and retail associations. Up to the end of 2019, the BMZ will be providing some 138 million euros for this, offering training for smallholders and achieving production increases at half a million farms.
SAVING FOOD:  
PROMOTING HEALTH, 
PREVENTING LOSS

The Food and Agriculture Organization of the United Nations (FAO) estimates that about one third of all food is lost worldwide on its way from the farm to the table. It is estimated that, in sub-Saharan Africa alone, grain worth four billion US dollars is lost every year – enough to feed 48 million people.

Poor infrastructure and a lack of knowledge destroy food. Food is spoiled as a result of improper harvesting methods and storage or by pests and pathogens, on the way to market or in the course of processing. If food is not produced, processed and stored properly, they may become contaminated.

Aflatoxins are a case in point. Aspergillus flavus, a mold which particularly affects maize and peanuts but also other grain, oil seeds and spices, is highly toxic. It causes liver cancer, reduces the absorption of nutrients in the human body, and weakens the immune system. In children, it negatively affects development and growth. An estimated 4.5 billion people in developing countries are absorbing aflatoxins with their food unknowingly.

There are many ways of saving food from pests and from spoiling. For example, crops can be protected from pathogens by immunizing the soil. Improved harvesting and transport techniques can prevent mechanical damage to the harvest. The shelf life of the products can be improved through proper processing and packaging. If food has been dried well before storage, disease is less likely. Finally, improved storage is important to safeguard harvests and, thus, the incomes of small farmers.

That is why the special initiative One World – No Hunger supports projects that develop and disseminate methods for better post-harvest protection, such as the efforts at the innovation center in Zambia to protect peanuts from aflatoxins.
Example from Kenya

CUSTOM-MADE KNOWLEDGE AND NEW IDEAS ON SWEET POTATO AND MILK

How can a dairy farmer with four cows treat simple cattle diseases himself and thus save the cost of calling the vet? How can he process the milk in order to broaden the range of his products? Could he set up a small biogas plant to produce gas for his kitchen stove? Why does an orange sweet potato contain far more vitamins than the traditional white variety? How can these tubers be cultivated more efficiently? Where can cuttings be purchased at a good price? How should the harvest be stored?

Small farmers can find answers to questions like these at the green innovation center at Bukura Agricultural College (BAC) in western Kenya – one of the poorest regions of the country. The center provides advice and education and helps disseminate innovative ideas that have been adapted to the local situation. The focus is on the entire value chains for sweet potato and milk.

HELP FROM KENYA’S THINK TANK – CENTER IS HOPED TO BENEFIT 15,000 FARMS

The green innovation center wants to offer hands-on, practice-oriented training. To that end, a yogurt production plant is being set up at the center. A biogas plant and a composting system are also being built. The Kenya Agricultural and Livestock Research Organization (KALRO) is sharing its knowledge with the center in order to help enhance teaching materials. The International Center for Tropical Agriculture (CIAT) and the International Livestock Research Institute (ILRI), too, are working together with the innovation center, helping Kenyan livestock farmers to develop better feed from local crops.

It is hoped that, by the end of 2017, the green innovation center will have reached 20,000 people with training and extension services, thus having helped 15,000 small farms to increase their incomes and having helped to create 300 jobs in the processing industry. Higher incomes will benefit every single family, enabling people to afford things like school fees for the children, drugs, or a refrigerator.

In many African countries, sweet potato is a staple food, but not all sweet potato varieties are the same.
Creating prospects for the future
The change that is happening in rural areas is most striking in the agricultural sector. Many farmers are unable to generate sufficient incomes from their land. At the same time, many farms are potentially capable of taking up innovative ideas and becoming more productive.

A FUTURE FOR PEOPLE IN RURAL AREAS

In developing countries and emerging economies, people in rural areas are more likely to be affected by poverty and hunger than people in cities. Seven in ten hungry people live in rural areas – in spite of the fact that most people there work in agriculture. But in many places, harvests are so meager that they do not suffice to meet families’ most basic needs.

Cities hold the promise of a job, higher wages and better health care. In rural places, education and career opportunities are often worse than in cities, and there are hardly any social services. These factors, as well as the overexploitation of natural resources, shortage of land, natural disasters and the consequences of climate change, all induce people to migrate to the cities.

A lot has to happen in order to encourage rural people to stay. Rural areas have to become more attractive through better infrastructure and services in areas such as water, energy, mobility, communication, health and education.

Successful farms (or associations of farms) that are integrated in the market can boost entire regions. They form the basis for employment opportunities in the agricultural sector and beyond – for example jobs in agricultural processing, crafts and trades, transport, and retail.

But rural transformation also comes with some challenges. People need social protection programs. The sources of people's livelihoods must be protected on a long-term basis, and natural resources must be preserved.

COMPREHENSIVE SUPPORT FOR RURAL TRANSFORMATION PROCESSES

Through its special initiative One World – No Hunger, Germany is assisting partner countries around the world in creating development options for agriculture and for rural areas. The idea is to pave the way for rural transformation to happen in a socially compatible and environmentally sustainable manner.

That is why the BMZ seeks to strengthen sustainable agricultural policies and rural economic development, to support investment in rural areas, and to foster the development of decentralized institutions. The main purpose of these efforts is to make agriculture more productive and to help create jobs within and outside the agricultural sector.

The transformation will only be sustainable if all stakeholders pull together. People must be involved and have a say in the change that is happening. Thus, multisector approaches that are supported and implemented by public, private and civil society groups are of key importance for viable rural areas.

By 2024, more than 200 million people (most of them young people) will have left the agricultural sector, looking for jobs in other fields.

(Source: OECD, 2015)
How can poverty and the rural exodus be addressed if harvests are meager and produce is poorly marketed, if many farms are too small and heavily in debt, and if soil fertility is lost as a result of overexploitation and lack of water? In central and northwestern Tunisia, this situation is causing many people, especially young people, to leave the rural areas.

Efforts are now being undertaken with German support to address that trend. Opportunities are being created for rural people through environmentally, economically and socially effective, sustainable change. The fundamental idea is to increase agricultural productivity and protect the soil and preserve its fertility while simultaneously processing the harvested produce in the region and marketing it nationwide and internationally. This will protect natural resources and at the same time create income and jobs, especially for disadvantaged groups.

To this end, local value chains are being analyzed for their weaknesses and potential. Targeted support is being provided in those areas that have been identified to offer the greatest leverage, be it with regard to improving productivity on the production side or with regard to the processing and marketing of products.

The analysis started out by identifying products that are competitive. In this region of Tunisia, relevant products are apricot, pistachio, olive oil and dairy products. Then value chain stakeholders – people from farming, processing, and marketing, and regional service providers and support institutions – were all brought together in platform groups for each product.

Workshops were held where participants looked at questions such as the following: What are the quality standards required in domestic and international markets? How can we adjust our cultivation and harvesting methods to these standards, and how can we make them more sustainable? How can small farmers adopt an entrepreneurial approach?

So far, some 4,000 people have taken part in trainings and workshops. Seven value chain platforms are developing joint projects in the areas of production, processing and marketing.
Example from Benin

**SUSTAINABLE RURAL TRANSFORMATION THROUGH THE CULTIVATION OF NUTS**

“They used to pay us 100 francs (about 0.15 euros) for 50 grams of shea butter,” says Sidonie Gassouon. “Now they give us twice as much.” She explains that this is due to better quality and improved marketing of their agricultural products. Germany is working in Benin to facilitate this kind of improvement.

As a result of low yields, the West African country’s most important industry, agriculture, is barely able to feed the people. This has many causes: a lack of infrastructure, inefficient administration, unclear land rights. There is a shortage of fertilizer, seeds, credit and investment. Food insecurity and the overexploitation of land are being exacerbated by population growth and climate change.

In order to improve the productivity of the agricultural sector, advice is being provided to the Government of Benin as part of Beninese-German development cooperation. Consultancy services focus on the development of a new land law and the creation of a better environment for private investment in the agricultural sector. In addition, Germany is assisting with the development of value chains for export products such as cashew and shea nuts but also for food crops such as rice and soy. Farmers are taught by trained personnel about more sustainable farming and harvesting methods and about the basics of business administration.

They learn to process and market their products themselves in order to make sure that profits will stay in the region. For example, unprocessed shea nuts fetch a lower price than cleaned and shelled nuts. The nuts are then processed by women’s groups in small businesses that make shea butter for the local market. In Benin, shea butter is a popular vegetable fat that is used for skin care and for cooking. In the global market, shea nuts are in demand as a raw material for cosmetics (shea butter) and for chocolate.

Sidonie Gassouon and more than 30,000 women have professionalized the way they make and sell shea butter, thus significantly increasing their incomes. This has changed the lives of their families. Many now invest in growing food crops such as maize, rice and soy. Some are sending their children to university. Other women’s groups are producing parboiled rice or tofu.
Protecting natural resources
For many people in poorer countries, natural resources – land, water, vegetation and biodiversity – are their source of livelihood. The destruction of these resources is advancing, reinforced by the impact of climate change, with devastating consequences for people’s living conditions.

A vicious circle of poverty and environmental degradation emerges as forests, land, and animal and plant species disappear and as the strain on bodies of water and groundwater resources grows. This does not only hamper rural development, it also has dramatic consequences worldwide.

SOIL – THE SUBSTANCE OF LIFE IN JEOPARDY

Soil, the basis of all agricultural activity, is under threat. Every year, some six million hectares of fertile land are lost due to inappropriate or excessive use. More than one third of the Earth’s surface is at risk of bush encroachment or desertification. As a result, important habitats for flora and fauna diversity are being lost. Climate change has been exacerbating these developments. And in parallel, as markets for goods and financial products have become globalized, productive land has become a fought-over resource.

Worldwide, players have realized the challenge. 195 countries and the European Union have joined the United Nations Convention to Combat Desertification (UNCCD), committing themselves to better environmental policies, more investment in sustainable land management and efforts to fight desertification. Many countries, however, are not yet doing enough to implement these commitments and to pursue sustainable ways of protecting soil and restoring degraded land in an inclusive manner.

Under the special initiative One World – No Hunger, the focus is on soil protection and rehabilitation for food security.
The aim of the program “Soil protection and rehabilitation for food security” is to protect or restore the fertility of smallholders’ fields and of pastureland used by nomadic pastoralists. In five countries – Ethiopia, Benin, Burkina Faso, Kenya and India –, efforts were launched in 2015 to test new, and also traditional, ways of improving soil fertility.

Farmers are taught cultivation methods that are adapted to climate change and help protect biodiversity. Specialists review ways of changing the production system so that greenhouse gas emissions are reduced and carbon sequestration in the soil and in plants is improved.

Mutual exchange and joint learning are intended to help players from different regions to share their insights on topics such as fertilizer management, agroforestry methods, and conservation agriculture. Policy advice is provided to partner governments in order to create an enabling environment for responsible land use, the idea being to give small farmers a chance to benefit from sustainable land management activities and to make use of available knowledge. Germany will be providing 70 million euros for this program for the period up to 2017, thus helping to rehabilitate more than 140,000 hectares of land.
Example from Ethiopia

WHEN FIELDS AND PASTURES TURN GREEN AGAIN

What can be done when farmland ceases to be fertile? Or when the land dries up or the fertile topsoil disappears? Many smallholder families in Ethiopia’s highlands are faced with questions such as these. The region, which is home to about half of the country’s 92 million inhabitants, has seen serious damage to its fertile land as a result of climate change, population growth and inappropriate cultivation methods.

Smallholder families benefit from training on soil protection and are able to increase their incomes in the long term.

THE GOAL: FOOD SECURITY

All these are components of a sustainable land management program of the Ethiopian government that is being supported by the BMZ. Advice is being provided to political decision-makers. Training is being offered to extension practitioners so that they can train small farmers. It is hoped that this will enable smallholder families in the Ethiopian highlands to feed themselves.

What is needed in addition to soil conservation is an increase in yields. To that end, villagers are taught, for instance, how to improve soil health and how to benefit from crop rotation. They are given access to improved seeds, and they receive advice on livestock farming.

Over the past 20 years, 166,000 hectares of land have already been restored in Ethiopia and are now being farmed sustainably. This has benefited more than 60,000 small farmers through significantly higher yields. Yields have gone up by almost 40 per cent for milk and by as much as three quarters for wheat.

As a result, many families now are able not only to produce enough food for themselves but also to sell fruit, vegetables, eggs and milk. As a result, household incomes have grown by as much as up to 50 per cent.

In many places, overgrazing, drought and traditional farming methods have led to land degradation. As a result, it is easy for heavy rains during the rainy season – which is becoming more and more unreliable – to wash away the soil. As a result, people’s food security is under immediate threat.

But there are ways of rescuing the land. The terracing of slopes can help stop fertile land from sliding away. Dams and reservoirs prevent rain from washing away large amounts of soil. If people plant hedges and trees, the soil is kept in place and can store more water.

Before and after: dams and reservoirs now prevent the erosion of valuable soil.
Protecting fishing grounds
Fish and fishery products are among the world’s most important sources of protein and nutrients. Worldwide, 17 per cent of people’s need for animal protein is covered by fish. And that share is often significantly higher in developing countries. Fish therefore plays a key role for global food security and for the fight against malnutrition.

**FISH BEING HUNTED TO EXTINCTION**

The world’s fish stocks are under threat. According to FAO estimates, some 30 per cent of all monitored stocks are being overexploited and more than 60 per cent are being fully exploited. Many species of fish are threatened by extinction. If they disappear, so will many coastal people’s chance of living lives free from hunger and poverty.

One factor behind this trend is the tremendous growth and level of mechanization of global fisheries. Fish is a food that is in high demand worldwide, and a much fought-over resource. Since 1950, the number of fishermen has risen by 400 per cent, while the number of people employed in agriculture has only risen by 35 per cent.

Modern technology makes it easy to spot and capture schools of fish. Many fishing fleets are illegal. They contribute significantly to the overexploitation of fish stocks.

So sustainable fisheries management is needed. Where fishing takes place in line with regulations and is monitored, illegal capture can be reduced, stocks can recover and legal artisanal fishermen can secure their livelihoods. Sustainable aquaculture, too, can help protect global fish stocks. Controlled raising of fish reduces the pressure on wild fish stocks, provided the industry succeeds in further reducing the share of fish meal and fish oil in aquaculture feed. The aquaculture sector has grown at an average rate of more than eight per cent since 1980, making it the fastest-growing animal-based food sector.

In its partner countries, the BMZ supports artisanal fisheries, sustainable fish consumption and the fight against illegal fishing.
**ONE WORLD – No Hunger**

**Protecting fishing grounds**

In many countries, fish is the most affordable source of animal protein.

Putting a stop to illegal fishing: Mauritania’s coast guard monitors the country’s waters.

**500 million**

In developing countries, fish contributes to the livelihoods of 500 million people.

**35 billion**

Fish accounts for 35 billion dollars in export revenues, meaning that this product is the most important “agricultural” export good of developing countries, ahead of coffee and rubber.

**ENCOURAGING SUSTAINABLE FISHERIES AND AQUACULTURE**

With its special initiative One World – No Hunger, the BMZ is helping to improve the availability of fish for food insecure people around the world. In particular, people in regions with fish stocks are to be assisted in deriving greater benefit from sustainable fisheries for their incomes and for their health. Targeted support is being given to artisanal fishermen and aquaculture farmers who do their work in a sustainable manner.

The BMZ supports efforts for the sustainable management of artisanal fisheries, the certification of fishery products, and the fight against illegal, unreported and unregulated fishing (IUU fishing) both internationally and in various partner countries. All BMZ projects comply with the FAO Voluntary Guidelines for Securing Sustainable Small-scale Fisheries (VGSSF) and with the FAO Code of Conduct for Responsible Fisheries (CCRF).
For billions of people, fish is an important source of protein, especially in countries with high levels of poverty. In developing countries, fish contributes to the livelihoods of 500 million people. In Mauritania, the fishery sector not only provides food for West Africa’s people, it is also one of the biggest sources of employment and foreign exchange revenue. The upwelling zone off the Mauritanian coast, where nutrient-rich deep water moves up to the surface, is one of the most productive fishing grounds in the world. However, there was a risk of the waters being overfished by the growing number of local and especially international fishing fleets. This was not only damaging the Mauritanian economy but also putting the ecosystem, the fish stocks and the food supply for neighboring countries in jeopardy.

In order to protect its fish stocks, Mauritania developed plans for their sustainable management. Germany helped the country in that endeavor. The plans lay down where and when fishing is allowed, and the volume of catch that is permitted. However, there was no functioning monitoring of fishing activities, which would have been needed to enforce these rules. The speedboats which the Mauritanian navy had at the time were unsuited for monitoring the 200-nautical-mile fisheries management zone. The range of the boats is not sufficient, and they cannot operate in a rough sea.

Thanks to support from Germany, Mauritania has since become the only African country besides South Africa to have established a modern and efficient fisheries monitoring system. An ocean-going frigate now monitors the waters together with smaller fishery patrol boats, and vessel traffic is being monitored by radar, transponder and satellite.

However, technology alone is not enough. Training is also being provided to staff, and a strong fishery monitoring agency was set up that has the authority to fine fishermen who have been caught fishing illegally. These fines now cover a large proportion of the agency’s costs. This is helping to ensure that the fishing grounds off Mauritania’s coast will still provide food and income for future generations.
Securing access to land
Most rural people’s livelihoods depend directly on their access to land. The majority of them engage in subsistence farming, which means that their survival hinges on the land they can use to graze their goats or plant their corn. But many small farmers only have informal land rights, without official recognition or sufficient protection. Women are particularly disadvantaged. In many places, it is much harder for them than for men to use or to own land, due to traditional inheritance and family law regulations.

720 million

Insecure land tenure affects some 720 million rural people worldwide.

GROWING INTEREST IN LAND AMONG INVESTORS

As a result of the food price crises in the past few years, fertile land has increasingly become an item of interest to international and domestic investors. They buy or lease large areas of land to grow food and fodder crops. Often, farmland is also used to grow biomass, for instance for fuel.

In such cases, the interests of investors – but also of local, sometimes corrupt, elites trying to secure smaller areas of land – may clash with those of small farmers and pastoralists. Many of them have been using their land for generations, often without land titles, just based on traditional land use rights. This particularly applies to indigenous communities. When their land is sold, they often have no means of defending their rights. Particularly in countries with poor governance and weak administrative institutions, this may result in displacement or resettlement and, ultimately, in violent conflict, poverty and hunger.
Secure tenure and access to land are key to the implementation of the human right to food. Only if people have access to fertile land, water and other natural resources can food security be achieved. A person who can be sure that his or her land will not be taken away from them will make investments and use the land in a productive and sustainable manner. Under these conditions, development is possible.

The One World – No Hunger initiative addresses this aspect. It supports Germany’s partner countries in fostering responsible land policies.

Responsible means that secure land tenure for local people is the top priority. In order to prevent corruption and nepotism, it is very important to ensure transparency and participation as land rights are formalized. Investments must be socially and environmentally compatible. This means, not least, that stakeholders must have a say in the planning and implementation of the investments, and that they must receive appropriate compensation if they lose land.

The United Nations Voluntary Guidelines on the Responsible Governance of Tenure of Land form the basis for this. They say that before the authorities permit the sale of a piece of land, they must assess the impact of that sale on local people and on the environment. They also say that customary rights, too, have to be protected, not only property and use rights that have been formally established.

People living in regions where land rights tend not to be formalized often do not know about their rights, or how to defend them. That is why the special initiative One World – No Hunger supports civil society organizations that engage in education campaigns in this field.

Women still have less access to land than men. The One World – No Hunger initiative seeks to strengthen their rights.

Pastoralists in Ethiopia: clear use rights prevent conflict.
Paul Isaack’s El Picador Farm is located some 370 kilometers south of Namibia’s capital, Windhoek. He has 180 Karakul sheep, 400 goats and 190 head of cattle – and he has to feed a family of twelve. That is not easy. There are loans to pay back, water is scarce, and a donkey cart has to make do for transport. But El Picador has been picking up ever since Johannes Motinga started his regular consultancy visits to Paul. Johannes, an experienced farmer himself, gave Paul advice on the construction of wells and on switching from black to white sheep, as their wool fetches a better price. Johannes Motinga is one of more than 30 mentors who pass on their knowledge and experience to other farmers.

This is an urgent matter, because Namibia is weighed down by its colonial heritage. When the country became independent in 1990, almost all commercial farmland was in the hands of the white minority. The disadvantaged black farmers only owned 2.7 per cent of the farmland. In the northern part of the country, by contrast, where people have traditionally been using land based on communal land rights, there were no legally binding land titles. But more than half of the local people rely on subsistence farming. Some 30 per cent of the people are poor, some 15 per cent are in fact considered to be living in extreme poverty.

Unfair distribution of land, insecure tenure, population growth, poverty and growing demand for food – an explosive mix. The Namibian government has therefore been working on a land reform, supported by Germany. Landless people, women and disadvantaged population groups are to receive land, and their land rights are to be secured. The reform has been successful: by early 2015, some nine million hectares of land had been distributed to landless and disadvantaged people. More than 85,000 people received land titles, some 40 per cent of them women.

However, many new farmers are finding it hard to cope because they lack knowledge and experience. Some actually fail altogether. This is beginning to change thanks to the mentorship program, which is being supported by the BMZ. So far, Johannes Motinga and the other mentors have counseled more than 10,000 new farmers and smallholder families. People like Paul Isaack and his family are benefiting from their experience.
Accepting our responsibility – sustainable consumption

Local food that is in season tastes good and is good for the climate.
Every one of us is responsible for their consumption patterns. Too much of the food grown on the world’s farmland still ends up in the trough, in the fuel tank or in the trash can. Through just a few small steps, we can help every day to build a world without hunger.

CONSUMER TIPS FOR SUSTAINABLE CONSUMPTION

✓ Make better use of food

One in eight food items bought in German shops is thrown away. This has consequences for the environment. The production of food requires the use of valuable resources – such as arable land, water, fertilizer, and energy for harvesting, processing and transport – and it causes greenhouse gas emissions. With every food item we throw away, we are senselessly wasting these resources. If we plan our shopping well, cook our own meals and do not throw away food that is still edible, we help to fight hunger.

✓ Buy fair trade products

If we want agriculture and fisheries to be sustainable and resource-friendly, we have to be conscious consumers. If we pay attention to fair and environmentally friendly production and supply chains or fishery practices whenever we buy food and textiles, we can help to ensure that humans and the environment are treated with respect. Sustainable consumption can help prevent conflict, misery and hunger. It helps to protect the natural basis for people’s livelihoods and to safeguard the future for coming generations. Sustainability labels can provide guidance. The web portal SIEGELKLARHEIT.DE (in German) provides information about credible environmental and social labels.

✓ Buy sustainable products

If we buy food that is in season, and buy it from local farmers, we will not only enjoy a wealth of seasonal fruit and vegetables, we will also help to make sure that food which can be grown here does not have to be brought to us across long distances. That helps to protect the climate.

✓ Use energy intelligently

The people of the world’s poorer regions are particularly hard hit by the consequences of climate change. In those regions, climate change contributes to hunger, conflict and displacement. We are the main contributors to this – we, the citizens and enterprises of the industrialized countries. This means that climate action is an important task for all of us. Everybody can start in their own back yard – in their household, in their company, by changing their own habits. Heating our homes more consciously, driving our cars more economically and taking fewer plane trips are just three ways of saving energy and protecting the climate.