



Federal Ministry
for Economic Cooperation
and Development

BMZ in depth

Sustainable agricultural supply chains

End poverty, achieve food security, mitigate climate change,
make globalisation fair





Mango farm in Kenya






The red stone fruit of the coffee plant is also known as the coffee cherry.

Contents

Time to act	5
<hr/>	
1. A global challenge	7
<hr/>	
Why sustainable agricultural supply chains affect us all	7
2. Our approach: Sustainable supply chains	11
Pioneering approaches	11
Governments set the policy framework	12
Companies have a duty to fulfil	14
Across-the-board cooperation	14
Strong international partnerships	16
Working together sustainably	17
3. Our areas of action	19
<hr/>	
How we introduce sustainability into global agricultural supply chains	19
Measures in producer countries	19
Measures in Germany and the EU	24
Overarching measure: digitalisation	31
4. Agricultural commodities as the basis for value creation	35
<hr/>	
Overview of individual supply chains	35
Cocoa	36
Coffee	38
Cotton	42
Rubber	46
Bananas	48
Palm oil	52
Soy	56
5. Prospects	61
<hr/>	
What needs to happen next	61

A woman with glasses and a colorful headwrap is smiling broadly in a lush green cocoa field. She is wearing a white button-down shirt and a patterned wrap. She is holding a large, yellowish-orange cocoa pod that is attached to a tree trunk. The background is filled with dense foliage and trees.

“To me, cocoa is like treasure. It’s part of our culture. It was first grown by our ancestors, then our parents.”

Cécile Bilé-Assama
Cocoa farmer from Aboisso

Time to act

CASE STUDY: Growing cocoa in West Africa

Côte d'Ivoire and Ghana are the main cocoa-producing countries. 90 per cent of the crop is grown by smallholders. Like productivity and quality, income levels are low. 87 per cent of cocoa-producing families in Côte d'Ivoire and 83 per cent of those in Ghana do not earn a living income. This corresponds to over 1.5 million smallholders!

The consequences

Hunger, poverty, exploitative child labour, rural exodus and increasing deforestation of tropical rainforests are all inconsistent with living a dignified life and pose a risk to the global climate; study findings from the National Opinion Research Center (NORC) at the University of Chicago show that there are still more than 1.5 million children engaged in child labour in Côte d'Ivoire and Ghana.

CASE STUDY: Palm oil extraction in South-East Asia

84 per cent of the world's palm oil is produced in Indonesia and Malaysia. Large areas of rainforest are often cut down, slashed and burned to make way for the oil palms. In Indonesia alone, 480,000 hectares of rainforest were cleared as recently as 2017. Palm oil cultivation is also frequently associated with mass-scale human-rights violations.

The consequences

Destruction of the rainforest, species loss, release of greenhouse gas emissions, loss of carbon sinks, displacement, social injustice.

There are **160 million children** engaged in child labour worldwide.



112 million children

work in the agricultural sector,

with **71 million of these children**
carrying out child labour in Africa alone.



Palm oil plantation
near Villavicencio, Colombia

1. A global challenge

Children still work on cocoa plantations to produce the chocolate we eat. Rainforest is still cleared to make way for the cultivation of the palm oil found in our finished products. We need to act by fighting poverty, preventing exploitation and stopping climate change. We will only succeed at this if we work together to make global agricultural supply chains sustainable.

Why sustainable agricultural supply chains affect us all

It is almost impossible to imagine our everyday lives without agricultural commodities. Abstract as they may sound, these commodities include the palm oil in our shampoo, our morning coffee, the banana in our muesli, a piece of our favourite chocolate, our cotton t-shirts and the rubber tyres on our cars. Many of these products, which we often consume without a second thought, are made with processes that involve environmental destruction and human exploitation.

Smallholders

80 per cent of the world's farmers are smallholders. They account for around 90 per cent of cocoa production and well over 70 per cent of coffee, cotton and rubber production. A large proportion of the cocoa for our chocolate, for instance, comes from Côte d'Ivoire and Ghana. We would have to live without many everyday products if it were not for smallholders. Despite this, these individuals at the start of the supply chain are unable in the vast majority of cases to feed their families on the income that they generate from agricultural production. Their income from agriculture is so small in most cases that they live in severe poverty and are unable to invest in their farms. Entire families, including children, work day in, day out in fields and on plantations, yet they are unable to earn

a living income. As a result, they are denied the chance to live a dignified life and enjoy a secure livelihood.

Low prices

Added to this, soy, palm oil, cocoa, coffee and rubber are some of the greatest drivers of deforestation globally. Forests are cleared on a large scale in order to cultivate these commodities. Around half of the forests being destroyed worldwide are located on the equator, which is the primary growing area for agricultural commodities. If we want to do something about this, then we need to make global agricultural supply chains sustainable.

Many challenges, such as low commodity prices and poor wages for workers, are deeply embedded in global supply chains or systemic in nature. Making these supply chains sustainable is thus one of the main areas of action for international development cooperation. We will only solve this problem if all the relevant actors assume responsibility and companies, governments, civil society, trade unions and producers' representatives work together. If we fail to take action now, then we will be responsible for irreversible consequences that will threaten our collective existence.



Cocoa pods have a hard, thick skin.

Climate change

Almost 12 million hectares of tropical forest, just under one third of this old-growth forest, were destroyed by fire and clearance activities in 2019. This equates to the loss of one football pitch of old-growth forest every six seconds throughout the whole year. Old-growth forest is especially important for biodiversity and carbon sequestration. Clearing forests and draining peat soil releases large volumes of the greenhouse gas carbon dioxide (CO₂) into the atmosphere. Deforestation accounts for around 20 per cent of global greenhouse gas emissions, which are directly responsible for global warming. The practice is thus a bigger contributor to climate change than the transport sector. Climate change is destroying our planet. It is causing agricultural production to decrease further and increasing the risk of environmental disasters.

Human-rights violations

Those working in agricultural production often fall victim to human-rights violations. Forced labour, damage to health from pesticides, and a ban on trade union activity are just some of the human

rights issues in agricultural supply chains. Women and marginalised groups are exposed particularly frequently to these risks.

Migration

Forests are a direct source of livelihoods for over 1.6 billion people and are a key factor in the economies of many regions of the world. In some rural areas, forests provide up to 80 per cent of people's household incomes. Tropical rainforests in particular are a key source of income and food, and job creation. Some 60 million individuals, most of them members of indigenous people groups, are heavily reliant on woodland for their survival.

Forests directly provide more than

1.6 billion people with a livelihood,



contribute up to **80 per cent** of household incomes, are a key source of income and food, and create jobs.



Some **60 million individuals**, most of them members of indigenous people groups, are heavily reliant on woodland for their survival.

They possess traditional knowledge that is highly relevant to the conservation of biodiversity. People who are unable or barely able to make a living from growing activities are already migrating to cities or looking for alternative means of enabling themselves and their families to live dignified lives. Poverty and a lack of secure livelihoods are among the main reasons for migration and the rural exodus. The

situation is exacerbated by the impacts of climate change. The agricultural sector now holds barely any appeal for young people in our partner countries, and agricultural productivity is decreasing as a result.

The threat of resource scarcity

Very low yields, unacceptable incomes, deterioration in growing conditions as a result of climate change, and a mounting risk of disasters are the challenges facing a global population set to grow from 7.6 billion people in 2019 to around 9 billion people by 2050. The agricultural sector needs to in-

crease its productivity by at least 60 per cent to take account of current patterns of consumption and a growing world population. All of this leaves us in a race against time, one that we will only win if companies, governments, civil society, trade unions and producers' representatives work together and if we jointly pioneer new approaches. Unspoilt ecosystems are the prerequisite for providing the population with non-food agricultural commodities. Production increases must not have a detrimental impact on ecosystems. Unadapted agricultural practices lead to a creeping loss of soil productivity and, ultimately, to greater resource scarcity.

Case study:

Cocoa farmers in Côte d'Ivoire

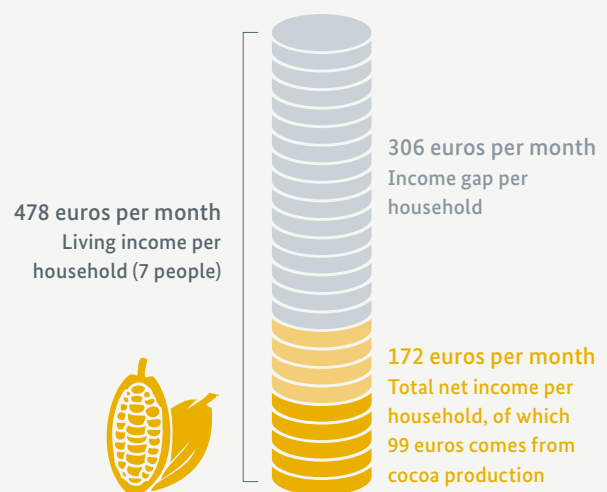
A typical cocoa-producing family in Côte d'Ivoire has seven members – four children and three adults. For a simple, yet decent standard of living, this family needs to earn a living income of 478 euros per month, as a living income is the only fair income. Around half of that required income covers the cost of a balanced diet. The family requires 55 euros a month for an appropriate standard of housing.

Expenditure on education, health care, clothing and other needs uses up more than one third of the total monthly income. The family should also be able to save five per cent of their monthly income for unexpected events, for instance, in order to compensate for a harvest failure resulting from a period of drought.

However, in reality, the family only has a monthly income of 172 euros. They earn around 100 euros from cocoa farming. Consequently, **they need another 306 euros per month** in order to be able to afford a simple, yet decent standard of living.

Potential solutions for closing this income gap include implementing higher commodity prices for smallholders, promoting alternative sources of income, and providing training for improving the productivity and quality of agricultural products.

Income of a cocoa-producing household



A cocoa-producing household in Côte d'Ivoire only earns around one third of the living income.

Source: The Living Income Community of Practice, 2015

Smallholders on their way to the nearest cotton collection point



2. Our approach: Sustainable supply chains

It is unacceptable that people are still being exploited in the process of extracting agricultural commodities. In order to make agricultural supply chains sustainable, there is an urgent need for all partners along the value chains to operate more sustainably. Previous approaches have fallen short. It is necessary to forge new alliances in order to systematically combat the exploitation of people and the environment. We can only solve global problems by working together at global level. Policy-makers set the framework for a more sustainable economy in this context.

Pioneering approaches

Our objective is clear: We must ensure that the work carried out by farmers enables them to live dignified lives. This will only succeed if agricultural commodities are produced sustainably and traded fairly. In order to feed the world's growing population, stop deforestation, conserve our ecosystems and mitigate climate change at the same time, productivity per field needs to be increased in the agricultural sector.

Adaptation measures

As a result of climate change, agricultural supply chains, particularly those within primary production, are already being increasingly affected by extreme weather events, changes in rainfall levels and temperature, and shifts in vegetation periods. Ambitious adaptation measures are needed in order to ensure the continued sustainability and stability of supply chains. The focus in this context should be on smallholdings in developing countries. By adapting practices and increasing productivity, we can also make the agricultural sector an attractive career field for young people.

Standards systems for the agricultural sector

There are already a number of good practices, including standards systems, which improve sustainability in many supply chains. These systems are most familiar as labels, such as Fairtrade and Rainforest Alliance, which appear on many products. These labels indicate at a glance that a product has been produced in accordance with sustainability criteria. While the standards systems have helped to improve the situation in many supply chains, they cannot resolve systemic issues, such as exploitative child labour and deforestation, on their own. Policy-makers and the private sector must create frameworks for sustainable supply chains. They have a number of levers at their disposal for this purpose.

Principles of agro-ecological farming

In order to increase productivity on existing growing land, there is a need for cultivation methods that retain or even enhance the soil's natural fertility. This is one of the goals of agricultural production based on agro-ecological principles, a method that also boosts the resilience of the agricultural landscape against the impact of climate change.

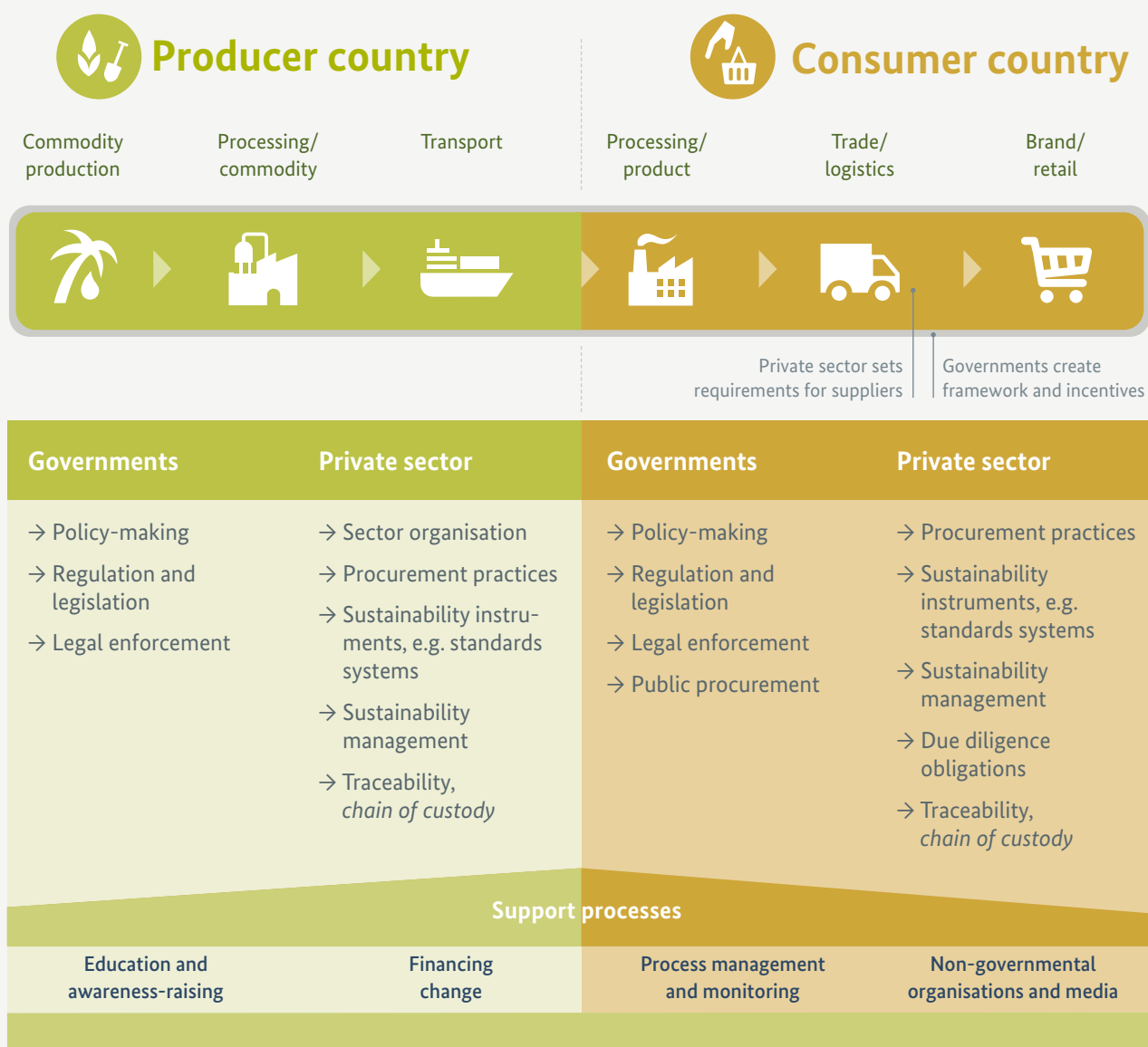
Governments set the policy framework

All governments have a duty to respect, protect and guarantee human rights. Governments in the global South and global North, that is, in producer and consumer countries, could make sustainability an integral part of their policies. Legislation and its enforcement are powerful levers in this context. The German government sets the frame-

work for economic activity on the German market and can stipulate rules for corporate due diligence. With its National Action Plan on Business and Human Rights (NAP), Germany has begun to implement the United Nations Guiding Principles on Business and Human Rights. However, NAP monitoring revealed in 2020 that not even 20 per cent of companies based in Germany with more than 500 employees meet their due diligence requirements voluntarily. Consequently, the Federal Cabinet approved the draft "Act on Corporate Due

Model of change

Levers for sustainable value chains



Diligence in Supply Chains” in March 2021. The Bundestag and Bundesrat adopted the Act in June 2021.

The EU is also planning to more precisely define the framework for sustainability in supply chains. The European Commission will submit legislative proposals in 2021 concerning, firstly, corporate due diligence requirements for human rights and environmental conservation and, secondly and specifically, deforestation-free supply chains. The European Parliament has already adopted several resolutions in which it has voiced its support for ambitious due diligence obligations for human rights and the environment in general, and deforestation-free supply chains in particular.

The United Kingdom is also planning to introduce legislation to require companies to carry out due diligence in relation to illegal deforestation.

Germany adopted the German Federal Government’s Guidelines on the Promotion of Deforestation-Free Supply Chains of Agricultural Commodities in April 2020, stepping up its commitment at international and bilateral level to reducing the volume of its agricultural imports whose production involves deforestation. The Guidelines will see the German government work in future to promote initiatives by the private sector, civil society and associations, support producer countries with establishing deforestation-free supply chains, and deepen cooperation at international level, especially with other key consumer countries.

France’s corporate due diligence legislation requires large companies to identify, prevent and provide accountability regarding risks to human rights and the environment. The Dutch parliament adopted a law on due diligence for the prevention of child labour in May 2019. This new legislation is expected to enter into effect in 2022.

Like corporate procurement, corporate due diligence and product traceability, state regulation and the enforcement of relevant rules can also

serve as crucial levers for establishing sustainable supply chains. This applies not only to Germany and other consumer nations, but also to the producer countries. Governments set the framework for economic activity at both ends of the supply chain. A frequent failure to properly enforce the pertinent legislation results in violations. This example shows how important it is to identify relevant levers. At the same time, all actors need to be empowered to use these levers. This is where the BMZ comes in, through the support we provide to governments and relevant actors in their work to boost sustainability.

Civil society

Sustainability is a task for society as a whole. Other actors outside of supply chains have a key role to play in ensuring that change is truly sustainable. Media outlets and non-governmental organisations influence policy-makers and companies from the outside through reporting and investigation. They identify problems and call for change. At the same time, they explain how individual pieces make up the big picture and raise awareness of relevant issues in both consumer and producer countries. Generally speaking, education helps to encourage sustainable production and responsible consumption. Producers can only implement sustainable cultivation techniques if they are informed about them. Consumers can only support responsible companies if they are provided with transparent information about sustainability in the supply chain. Information on production conditions must be available and presented in a readily comprehensible manner.

Other influential actors who could support a shift to greater sustainability from the outside are banks and investors. By stipulating sustainability criteria for their investments and lending activities, they exert relevant influence over supply chains. International donors and foundations make money available to promote sustainability in poor countries in particular. In this way, they help to finance change. There is a need when it comes to our holistic approaches for us to work

together in new alliances at national, European and international level and to all pull in the same direction. The focus here is not on the interests of individual states, on maximising profits for companies or on providing consumers with the lowest priced food, but rather on the future of our planet, the conservation of our environment and the right of every individual to decent living conditions. The BMZ thus advocates strongly for partnerships at national and international level.

Companies have a duty to fulfil

While consumers can exert influence on the supply chain through their purchasing decisions, they can ultimately only purchase what is on the shelves. It is not consumers themselves who determine how the prices they pay are divided up among all the actors along the supply chain. It is food retailers and food manufacturers and their suppliers who are responsible for this task. They are the ones who determine the terms and conditions of production and supply. Companies that purchase and process commodities in our partner countries have a particular responsibility. They are obligated to only include in their portfolio products that verifiably meet sustainability criteria. The purchasing practices of companies are a powerful lever. If food manufacturers in Germany pull on this lever, then they can exert direct influence over production conditions in partner countries. Traceability and compliance with due diligence are levers that can be used by companies to influence sustainability along supply chains. In this way, firms can require their suppliers to meet particular social and environmental standards and thus determine rules for the entire supply chain.

Across-the-board cooperation



Forum Nachhaltiger Kakao
German Initiative on Sustainable Cocoa

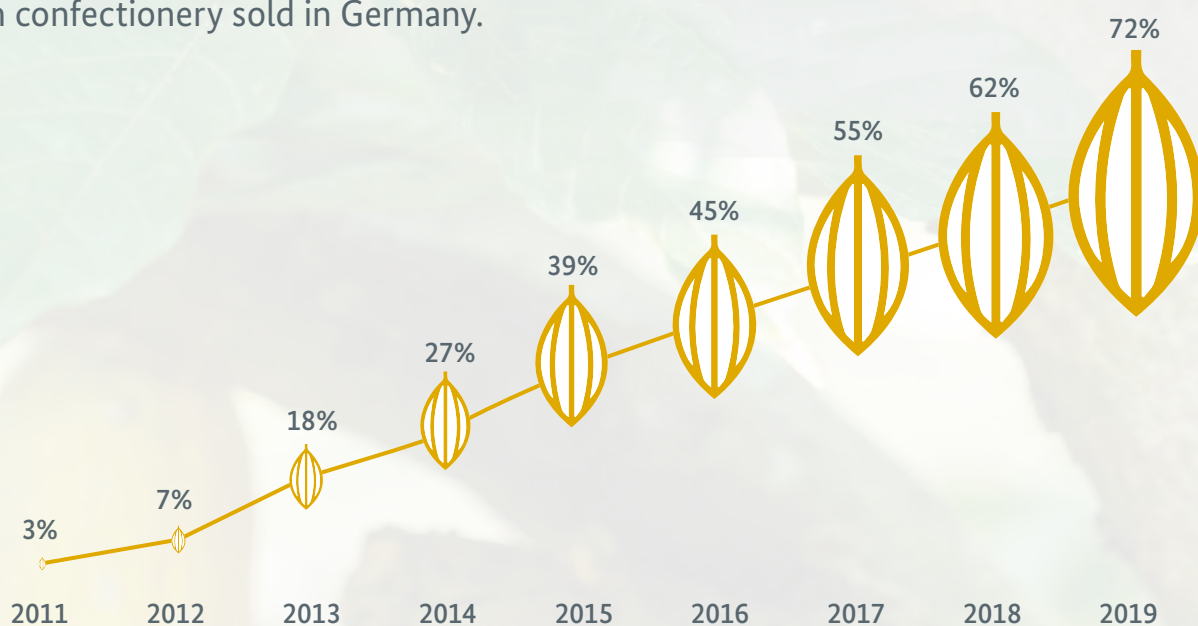
The cooperation arrangement between the BMZ and the German Federal Ministry of Food and Agriculture (BMEL) under the **German Initiative on Sustainable Cocoa** is a good example of the kind of inter-ministerial cooperation that is needed. This initiative sees the ministries joining forces with the confectionery industry, the food industry and civil society to achieve a sustainable cocoa sector. Federal Minister of Food and Agriculture Julia Klöckner and Federal Development Minister Gerd Müller are also advocating for a sustainable cocoa sector with their ten-point plan that involves all German actors. We want to work together to ensure that, in the long term, 100 per cent of the processed cocoa products sold in Germany have been certified for sustainable production. We are working together on forest conservation, improving the living conditions of cocoa-producing families in West Africa, combating exploitative child labour, and strengthening the role of women in the cocoa-producing sector. This is a step in the right direction, which must be followed by many further steps in other areas of global agricultural supply chains.

Policy-makers expect companies to comply with their due diligence obligations in accordance with the five core elements of the UN Guiding Principles on Business and Human Rights. They should know the provenance of their raw commodities and be able to trace this back to smallholder production. While this is not always the case by any means, a number of companies are already living up to their responsibility and working on making their supply chains transparent, fair and sustainable. These firms will be well prepared if policy frameworks change further. Voluntary commitments by companies are a measure for boosting sustainability.

Pods on a cocoa tree during the dry season.

Proportion of sustainably produced cocoa

in confectionery sold in Germany.



Source: Association of the German Confectionery Industry (BDSI)

Strong international partnerships

Strong alliances are also essential at European and international level. We need to think more intensively at cross-border level and work towards the same goals, as this is the only way that we will live up to our responsibility to fight for a fair world.

Zero hunger, no poverty, environmental conservation and climate action are just a few of the 17 Sustainable Development Goals (SDGs). The German government has committed to achieving these 17 SDGs. They have been formulated in the United Nations' 2030 Agenda for Sustainable Development and are aimed at governments worldwide, as well as civil society, the private sector and the scientific community. The international community intends

to achieve the SDGs by 2030. Germany is making its contribution to this endeavour through its work to promote sustainable (agricultural) supply chains.

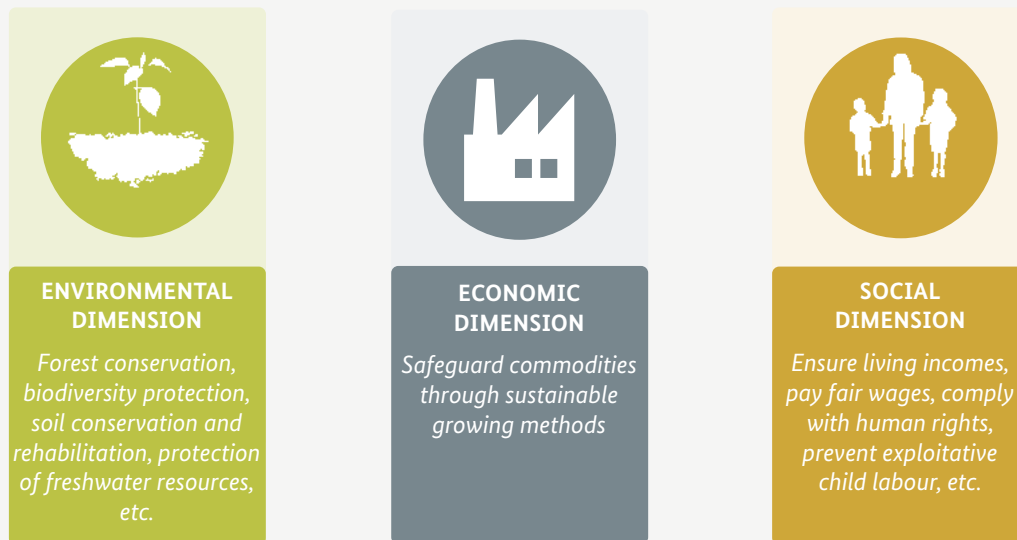
The German government has also committed to observing other international agreements and initiatives. These include the Paris Agreement, the Universal Declaration of Human Rights, the Convention on Biological Diversity, and the international core labour standards of the International Labour Organization (ILO). Additionally, Germany advocates within the G7 and the G20 for more sustainable business practices. Through its Marshall Plan with Africa, Germany looks to support partner countries in Africa with achieving sustainable economic development. The World Trade Organization (WTO)'s Trade Facilitation Agreement (TFA) allows domestic processes for developing countries' exports to be simplified and unnecessary

Sustainable supply chains feed into the SDGs



Source: GIZ

The three dimensions of sustainable development



Source: GIZ

charges reduced. Industrialised nations should support developing countries with this. Germany has also advocated for developing countries within the WTO.

In the New York Declaration on Forests, the German government has committed along with other governments and companies to end deforestation by 2030. The BMZ is also working at EU level to promote measures for improving sustainability in supply chains. In order to encourage deforestation-free agricultural supply chains, seven European governments, including Germany, signed the Amsterdam Declaration on Deforestation and the Amsterdam Palm Oil Declaration in 2015. The BMZ is also calling for international trade agreements between the EU and third states to bindingly regulate the sustainability of agricultural commodities.

Working together sustainably

Our strategy is clear: Governments and the private sector must work together more closely along the entire supply chain. This cooperation must not stop at national borders or the edges of spheres of responsibility. It is necessary to reach the entire supply chain with our measures, from the small-holders in the producer country to the consumers in the consumer country. Civil-society actors and media outlets will monitor this change. We always act in this context in the interests of sustainability. This means that we always take account of three dimensions when developing specific measures: the environment, the economy and society. This is the only way that we can make agricultural supply chains truly sustainable.

Cotton seeds are separated out from the fibres and later processed to make oil or improved seeds.



3. Our areas of action

If we wish to make agricultural supply chains more sustainable, then we cannot employ individual measures that focus on isolated parts of the value chain. Instead, our measures must be integrated and at the same time tailored to the different commodities and production locations. They are geared to everyone: producers, governments, companies and consumers.

How we introduce sustainability into global agricultural supply chains

How exactly do we put our strategy into practice? The BMZ works within different areas of action. We always think in local, regional, national and international terms. In this way, we activate different levers, both in our partner countries and here in Germany, for achieving greater sustainability in supply chains. This sees us focus on the entire supply chain, from the producer to the consumer country.

We use a combination of different, yet integrated resources. We will now present our measures below.

Measures in producer countries

Living incomes

Despite working, most of the individuals at the beginning of the supply chain do not earn sufficient money to be able to afford a simple, yet good life with their families. In many cases, this money is not enough for them to simply survive on, let alone invest in their own farms. This applies in particular to smallholders in Africa, Asia and Latin America.

If there is no money to invest, then agricultural productivity suffers. Poverty and the exploitative child labour resulting from it are often the consequences. Many families are leaving their farms, rural regions or even their home countries in search of a better life.

In order to put an end to this situation, there is a need to create transparency along the entire supply chain. One important step in this direction is to secure a living income for farmers. For this purpose, we calculate how high a living income should be, and we have, for instance, established a working group with German retailers in order to raise incomes at the beginning of the supply chain.

What levers are we already using?

We determine and draw attention to the size of income gaps for farmers in different parts of the world.

We also work with the private sector, governments and civil society to devise innovative approaches to improving the income situation of smallholders and their families.

EFFECTS

In the best case scenario, greater transparency about living incomes will bring about a rethink regarding the pricing of products. More money must reach the farmers. This is a key step on the road to fair remuneration.

What are the levers that we still need to activate?

→ Promote sustainable business relationships:

Many firms and governments are unaware of the conditions under which their agricultural commodities were grown. The prices they pay for the goods are so low that they neither cover the costs of production nor allow for a living income. There is often a lack of direct and long-term relationships with producers, relationships which would aid companies when it comes to securing their own commodity supplies in the long term. If producers give up their farms as a result of poverty, then this can also harm companies. Consequently, improving the incomes of farmers is a necessary counter-measure. Firms and governments must be aware of local production conditions and introduce support

measures for good agricultural practices or occupational safety. Companies need to conclude long-term agreements with producers and pay fair prices. However, there are still too few companies seriously pursuing this approach.

→ Place a focus on living incomes within certification processes: Product certification alone is often insufficient for ensuring that producers receive a living income. A number of standards systems attempt to achieve better incomes for smallholders by setting additional premiums and minimum prices. Consequently, we support standards systems with integrating and implementing living incomes as a criterion. This enables retailers and consumers to have certainty when purchasing certified products that smallholders are earning a living income from the production of those products.

Calculating a living income



Example of a cocoa-producing family in Côte d'Ivoire, which comprises seven people on average.

DEFINITION: LIVING INCOME

The net annual income required for a household in a particular place to afford a decent standard of living for all members of that household. Elements of a decent standard of living include: food, water, housing, education, healthcare, transport, clothing, and other essential needs including provision for unexpected events.

Source: *The Living Income Community of Practice*, 2015



Reforestation can make a valuable contribution to climate change mitigation. However, it is even more important to conserve virgin forests with their particularly rich biodiversity.

Establish sustainable production regions

The goal of this measure is to improve the living conditions of smallholders and facilitate sustainable development throughout the region. The local government in the producer country consults with the civil-society and economic actors operating in a given region to determine how to shape and implement land use on a sustainable basis. They reach a joint decision as to the areas in which sustainable agriculture will be practised, the areas which will be designated as protected zones and the areas in which economic and/or industrial development will be promoted. This measure strengthens sustainability within the administrative unit (district, region, province or similar).

The creation and implementation of joint land-use plans sees economic and environmental decisions going hand in hand in a sustainable production region. Linking these sustainable producer regions with customers along global supply chains provides a starting point for deforestation-free supply

chains. This approach involves all the commodities produced in the region. A range of digital systems (based on satellite or aerial imagery) can be used for monitoring purposes by the local government and independent third parties. Companies and the local government can use these images to prove that they are complying with sustainability rules, for instance, that there is no further expansion of deforestation within their supply chain. Digital traceability solutions help in this context to permanently verify sustainability status and, where relevant, enable interventions. Sustainable production regions also improve the living conditions of farmers. They receive training within the region in sustainable growing practices and good farm management. Their economic situation also improves as a result of being directly connected to global supply chains.

Sustainable production regions require sustainable land use. This is achieved, for instance, through avoiding the use of hazardous chemicals. The BMZ supports smallholders around the world with applying agro-ecological principles, thereby linking economic, environmental and social issues.

Strengthen women's equality

Many households in rural regions of developing countries are female-led. Women play a key role in land management and their families' welfare. Strengthening the role of women through training and giving them a say in the distribution of land and resources offers potential for increasing agricultural yields and promoting the sustainable development of rural regions.



WOMEN IN THE COCOA SECTOR

PRO-PLANTEURS is a joint project of the German Initiative on Sustainable Cocoa, the Ivorian government and the German government in Côte d'Ivoire. The project has a focus on women, for whom it creates additional income opportunities, for instance, in the cultivation of additional food crops, fish farming and poultry-keeping, and thus also creates food security for their families.

What levers are we already using?

The BMZ promotes the development of sustainable production regions in Indonesia and Côte d'Ivoire, and is also rolling out this approach in Ethiopia and Colombia. A sustainable procurement region is established in each case in partnership with the local government, civil society and companies. Agriculture, forest conservation and economic development are addressed equally and the challenge is tackled as part of an overall approach.

EFFECTS

By supporting local governments and companies in producer and consumer countries, we are helping to make land-use planning more sustainable and thereby also contributing to forest conservation.

What are the levers that we still need to activate?

→ In order to allow universal statements to be made on the sustainability of a region, it is necessary to have independent institutions that set and review criteria in a similar way to a standards system. We are supporting these efforts.

→ Make visible the benefits of sustainable production regions and strengthen relationships: In order to facilitate the long-term emergence and development of sustainable production regions, there is a need for companies that clearly recognise and leverage the economic benefits of such approaches. This requires that we strengthen the relationships between purchasing companies and local administrative units.

Improve standards systems

Standards systems, such as Fairtrade, the Rainforest Alliance and the Roundtable on Sustainable Palm Oil (RSPO), provide a means of achieving sustainability along the entire supply chain. They specify criteria for production, trade and processing. Independent auditors monitor compliance with these criteria. Standards systems provide labels that make it easier for consumers and companies alike to make sustainable purchases.

Procuring and purchasing certified goods is one of the most efficient ways for companies to improve the sustainability of their products.

However, if it says sustainable on the outside, then it must also be sustainable on the inside. Consequently, the criteria of standards systems need to be further improved and compliance with these criteria monitored more stringently. The kind of agricultural approaches we require for sustainable production regions are only addressed sporadically by standards systems at present. Currently, these systems make reference primarily to individual production steps. In order to roll out sustainability more widely and avoid stand-alone solutions on individual plots of growing land, we support the development of standards for sustainable landscapes.

What levers are we already using?

The BMZ promotes sustainable cultivation in entire landscapes or regions. Represented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, it engages in ongoing dialogue with the standards bodies to this end. GIZ works with standards association ISEAL Alliance to supplement the criteria of the standards systems in regard to holistic agricultural approaches. Through GIZ, the BMZ advocates for further improving sustainability standards. Such improvements are achieved, for instance, by revising standards to give them more teeth and strengthening topic areas of central importance to the BMZ.

We also help to ensure transparency, informing consumers on the website www.siegelklarheit.de about the different criteria of the sustainability standards.

EFFECTS

The labels used by standards systems make it easier for consumers to buy sustainably. In this way, these systems have an impact on social and environmental sustainability at local level and along the supply chain.

What are the levers that we still need to activate?

- Use certified products: certified goods cost more due to the greater expense involved in more sustainable production processes. Unfortunately, by no means all of the commodities produced in accordance with sustainability standards are also sold at a higher price. This is because there are not enough customers. This is where it is up to us as consumers to prioritise certified products when deciding what to buy and thus to strengthen their market position. At the same time, companies can gear their purchasing practices to a greater degree to certified commodities.
- The development of standards systems has created a new instrument for mainstreaming sustainability within global supply chains. The governments of consumer and producer countries should support private-sector activities by providing policy and legislative frameworks that particularly promote sustainably produced commodities through tax and trade policies.



Dried cocoa beans

Improving local conditions

What levers are we already using?

The BMZ works with its partners in many projects to improve local conditions. Our agricultural projects seek to improve the situation of the local population. Farmers learn good agricultural techniques and farm-management practices. They receive instruction in how to meet quality standards in order to improve their opportunities for participating in the market.

Attention is also paid here to the opportunities afforded by modern information and communications technology (ICT) for tackling challenges in the different global agricultural supply chains. Digital educational offerings can aid cultivation of commodities. Digital information, such as text messages with commodity prices, increases transparency and fairness in the sales process.

EFFECTS

By supporting good governance, capacity development and training, we advocate for better land use and sustainable growing methods. In this way, we contribute to higher incomes and better conservation of the environment.

What are the levers that we still need to activate?

- **Monitoring:** Governments and companies must establish reliable forest monitoring systems to protect these areas against deforestation.
- **Enable traceability:** If agricultural supply chains are to be safeguarded, then it is necessary to establish traceability systems that allow commodities to be followed all the way back to the smallholders.

Measures in Germany and the EU

Establish multi-stakeholder partnerships

Multi-stakeholder partnerships are coalitions of actors from the private sector, civil society, the research community, and government. They are a means of making a given economic sector more sustainable. Within these partnerships, the actors in a given sector of the economy agree on the goals they wish to achieve together. By joining forces, these numerous players achieve more than individual companies or non-governmental organisations could on their own. Multi-stakeholder partnerships are a key instrument for implementing the 2030 Agenda.

What levers are we already using?

In Germany, the federal government supports a range of multi-stakeholder partnerships.

Case study: Partnership for Sustainable Orange Juice



The BMZ launched the Partnership for Sustainable Orange Juice (PANAJO) initiative in 2020 together with major German retail chains and juice manufacturers such as Beckers Bester, Kaufland and Rewe, trade unions and Fairtrade. The goal of this multi-stakeholder partnership is to mainstream living incomes for orange juice in order to make the orange juice supply chain fairer. The initiative advocates for better occupational safety, social justice and the payment of living wages in the production process, particularly in Brazil, the main producing country.



Initiative for Sustainable Agricultural Supply Chains

The INA gathers some 90 actors from the private sector, civil society and the world of policy-making. Together, they intend to employ holistic approaches to improving the living conditions of smallholders and making global agricultural supply chains more sustainable. In addition to their work on individual commodities and supply chains, they have opted in this context to develop sustainable regions. The INA's work is focused on living incomes and living

wages, and forest conservation. The initiative also serves as a knowledge platform and service centre. It creates space for synergies, for instance, in regard to digital solutions and to improving transparency in the supply chain.

You can find more information at
www.nachhaltige-agrarlieferketten.org/en/



Smallholder at
a market in Ethiopia

Case study: Global Platform for Sustainable Natural Rubber:

The independent Global Platform for Sustainable Natural Rubber (GPSNR) was launched by the world's 11 leading tyre companies in October 2018 in response to the environmental and social risks in the natural rubber sector. The objective of the platform is to create a fair and environmentally responsible natural rubber supply chain. Tyre manufacturers, rubber suppliers, rubber processors, vehicle manufacturers and civil-society organisations work together to develop solutions to complex challenges within the supply chain and thereby help to make the natural rubber sector more sustainable.

EFFECTS

Multi-stakeholder partnerships contribute to the implementation of the 2030 Agenda for Sustainable Development. Partners agree common goals and contributions in a spirit of cooperation. This enables companies, for instance, to commit to implementing sustainable purchasing practices. If companies within the multi-stakeholder partnership only buy certified cocoa, then the partnership's agreements could directly and positively influence sustainable development.

What are the levers that we still need to activate?

→ Establish and strengthen multi-stakeholder partnerships in the partner countries: Multi-stakeholder partnerships are currently employed primarily in Germany and Europe, but they could also help to implement goals for greater sustainability in producing countries too. Additionally, these partnerships would also facilitate more effective dialogue at the beginning of the supply chain with local governments, farmers and industrial producers. Multi-stakeholder partnerships in Germany could then enter into direct dialogue with local contacts. This would ensure greater transparency and communication, further facilitating the agreement and implementation of sustainability goals.

Establish fair trade policy

The rules of international trade and bilateral free trade agreements determine the market access of products. If these rules are geared to sustainability, then they will have a positive impact on sustainable production conditions.

What levers are we already using?

The BMZ advocates for a fair EU trade policy at the same time as calling for chapters with agreements on sustainable development to be included in free trade agreements. These agreements need to be made more binding and, ideally, legally enforceable in the same way as agreements in investment chapters. We are joining forces with other EU countries to this end.

EFFECTS

By insisting on binding and fair trade and customs requirements, the EU will bring about positive change in the production of agricultural commodities in partner countries.

What are the levers that we still need to activate?

→ Build networks: Private-sector and government actors fighting for a fairer trade policy must engage to a greater degree in strategic networking.

→ Make respect for human rights a condition: Standards systems should also be viewed as pre-competitive criteria within the international trade system, that is, within the WTO rules. These rules currently allow access to the EU market to be denied for products that fail to meet particular food standards. However, it is extremely difficult to prevent the import of products that have been grown or produced without regard for human rights requirements, for instance. However, compliance with international human rights requirements should be as much of a requirement for granting import permits for products as compliance with hygiene requirements.



Women play a key role in land management and their families' welfare.

Set a good example

By imposing requirements for suppliers, companies set standards for the products they purchase. This also applies to governments and public administrations. For example, if a ministry decides to only serve certified coffee in its canteen, then it will only consider firms selling sustainably produced coffee when choosing a supplier. Consequently, the purchasing practices of companies and the state have a major influence on the market and on production methods in producing countries.

What levers are we already using?

The BMZ advocates for greater sustainability in public procurement. It has changed its own purchasing practice in order to set a good example in this area. Through its work on living incomes and living wages, the BMZ also supports companies with making more sustainable decisions when purchasing products.

EFFECTS

In deciding to purchase sustainable products, we intend to set an example for others. In this way, we can influence the purchasing policy of companies and the public procurement activities of other governments in consumer countries. The resulting requirements are passed along and change the supply chain.

What are the levers that we still need to activate?

→ Change the rules: Public procurement rules in Germany and Europe should be revised to make them more sustainable.

Strengthen business cooperation

Working through GIZ and other organisations, the BMZ can collaborate with companies to test innovative approaches to improving sustainability in supply chains. This requires us to support businesses in the initial stages with strategies that they otherwise

would not test out themselves. A business partner is deployed to support local communities in producer countries. Pooling the resources of the private sector and the BMZ generates synergies, that is, benefits, that positively impact the entire supply chain.

What levers are we already using?

In partnership with companies, such as those in the German tyre industry, we are establishing traceability systems to ensure end-to-end transparency in global agricultural supply chains. This allows us to create new opportunities for businesses in the global South to access markets and to encourage consumers in the global North to purchase sustainably produced and fairly traded products.

We plan partnerships with local companies that see them pay farmers a living income. The BMZ also works via GIZ with other partners to improve further conditions for farmers. This is achieved, for instance, by diversifying farming practices, expanding access to loans and making cultivation methods more sustainable. In this way, we intend through our joint efforts to enable smallholders at the start of the supply chain to enjoy a better quality of life.

EFFECTS

Companies that purchase their agricultural commodities in the partner countries can make their procurement practices more sustainable and thus provide a lasting contribution to improving sustainability along global supply chains. By bringing together companies in consumer countries with communities in producer countries, we are helping to create a better sustainability policy.

What are the levers that we still need to activate?

→ Step up engagement: There is a need for more German and international companies to commit to promoting sustainability.

Comprehensible information for consumers

Consumers are often unable to determine which products have truly been produced under fair conditions. This needs to change. Shoppers in supermarkets must be able to recognise at a glance whether or not products have been produced sustainably.

What levers are we already using?

By educating consumers, the BMZ is helping to boost demand for fairly traded products. What problems exist in the supply chains? How can citizens support fair and environmentally-friendly production methods? We answer these and other questions surrounding the topic of global agricultural supply chains in films and publications, and at International Green Week (IGW).

We must stress that people are still being exploited and the environment is being destroyed for our prosperity. In making consumers aware of this situation, we are generating acceptance within society of the need to change policy frameworks. At the same time, we advocate among consumers, policy-makers and companies for behavioural changes that will see them work together to make global supply chains sustainable.

EFFECTS

Consumers must be able to access user-friendly information about sustainable products simply and easily. When shoppers are given the choice between products that have been fairly traded and those that have not, and can quickly distinguish between the two by glancing at the labels, then they may change their purchasing habits. This then incentivises retailers to engage in more sustainable procurement.

More sustainability through communication with consumers

The BMZ raises awareness among citizens of living and working conditions in countries producing agricultural commodities such as cocoa and coffee. We also provide information about fair growing, trade and retail. A scanner exhibit by the BMZ at the IGW shows interested visitors how quickly a cocoa-producing family uses up its monthly income on essential purchases. Only very few people in the producer countries have a living income.



BMZ living income exhibit



Smallholders could use text message services to find out about market prices and weather forecasts.

Strengthening international political cooperation

Together we can achieve more. When it comes in particular to complex topics affecting many countries and economic sectors, international coordination is extremely important for bringing about and driving change.

What levers are we already using?

The BMZ coordinates with a large number of partner countries on priority areas for sustainable development in the respective country and regarding joint implementation of international agreements. This collaboration is especially focused on achieving climate change mitigation targets and the SDGs.

EFFECTS

A joint approach and close coordination between governments of producer and consumer countries ensure greater sustainability. By supporting partner countries with implementing policies, Germany contributes to improving the implementation of international agreements.

What are the levers that we still need to activate?

→ Evaluate international engagement: Many international companies will fail to achieve their goal of eliminating deforestation from their supply chains by 2020. We need to consider what else we could do to achieve our goals, for instance, the goal to conserve forests.

Overarching measure: digitalisation

We always pay particular attention to the aspect of digitalisation when designing and implementing projects. Guided by the concept of digital by default, we constantly examine the possibilities offered by modern information and communications technology for developing scalable solutions to the challenges in the different global agricultural supply chains.

Taking account of digitalisation

Digitalisation can enhance the sustainability of supply chains in many different ways. We see digital technologies as the foundation for modern and more productive agricultural practices which increase the appeal of the agricultural sector and offer new prospects in terms of jobs and employment. Digital educational offerings can aid cultivation of commodities. Digital information, such as text messages with commodity prices, increases transparency and fairness in the sales process.



Traceability systems permit end-to-end transparency regarding global agricultural supply chains and facilitate direct interaction between producers and consumers. Through our innovative and digital pilot projects, we examine new opportunities for businesses in the global South to access markets and we encourage consumers in the global North to purchase fairly and sustainably traded products. The decision as to

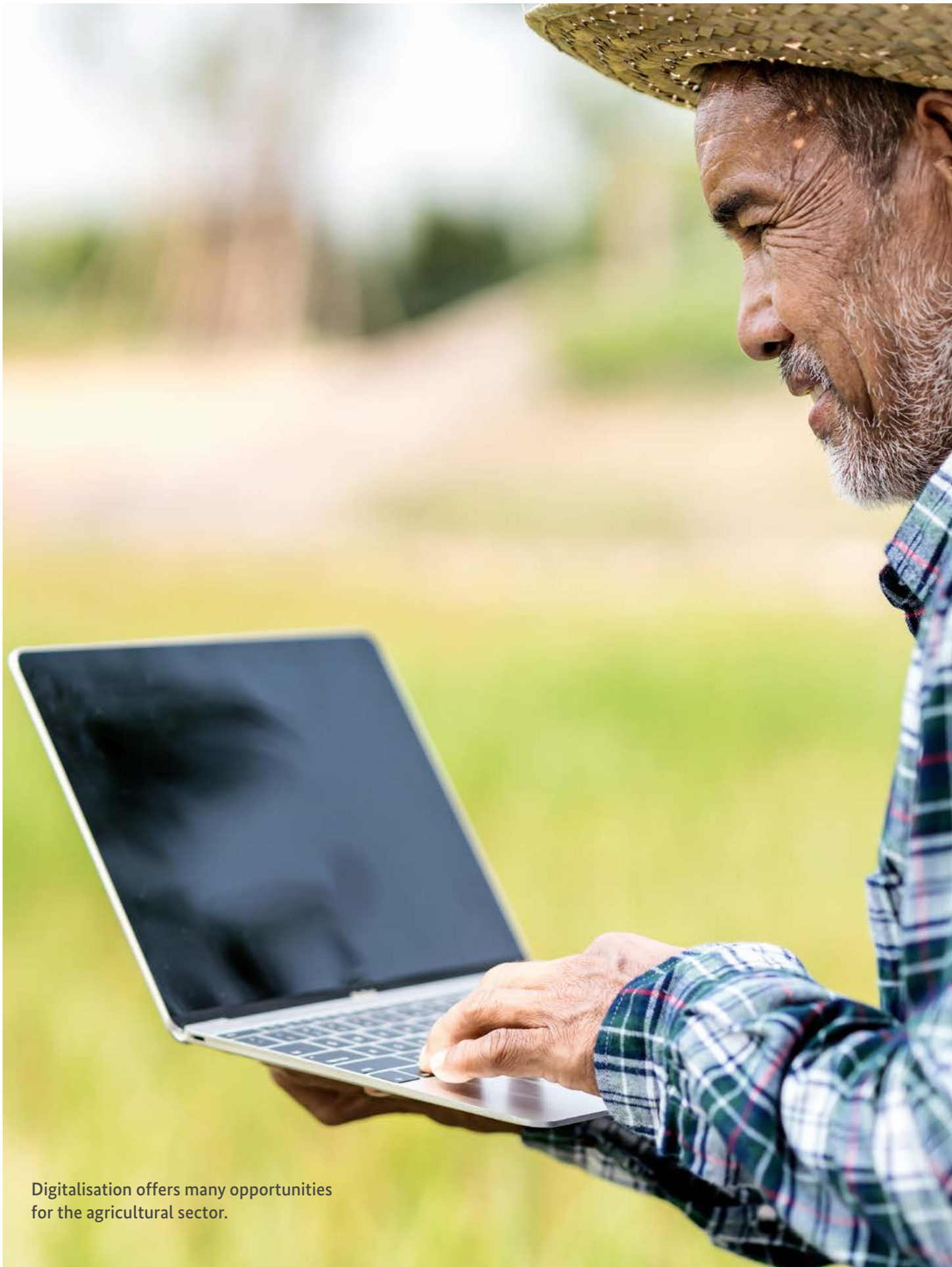
whether we employ technologies in individual cases and, if so, which ones depends in all cases on the respective benefits of doing so. We do not consider technology an end in and of itself. We are aware of our responsibility to ensure that our partner countries benefit from the opportunities of digitalisation whenever we would leverage such benefits for ourselves in the German private sector.

Digitalisation in agriculture

The BMZ does not only invest in piloting and refining digital technologies, but also drives the public debate on the effective use of such technologies in smallholder farming and for the traceability of agricultural supply chains. For instance, the BMZ helped to organise the 55th Brussels Development Briefing on Opportunities of Blockchain for Agriculture. Other participants included the European Commission, ambassadors of numerous African, Caribbean and Pacific states (ACP group), and representatives from the private sector, civil society and the research community.



The 55th Brussels Development Briefing was held in May 2019.



Digitalisation offers many opportunities for the agricultural sector.



Drying coffee beans
at the coffee cooperative
in Embu, Kenya.

4. Agricultural commodities as the basis for value creation

While many problems along agricultural supply chains may have similarities, we must not forget that, depending on the commodity, the associated challenges are highly unique. Consequently, we are focusing on a range of agricultural commodities, namely cocoa, coffee, cotton, rubber, bananas, soy and palm oil.





Overview of individual supply chains

Germany is the world's third largest importer of raw cocoa and its second largest importer of raw coffee. No other EU country imports as many bananas as Germany. Consequently, we bear a special responsibility in this area. In order to make agricultural supply chains more sustainable, we must tailor our measures to the unique challenges of individual sectors. At the same time, it is necessary to take repeated account of the fact that the tasks we intend to accomplish vary from region to re-





gion. Cotton farmers, for instance, are particularly vulnerable due to their high degree of dependence on weather conditions and global market prices. The same applies to palm oil producers. That being said, the clearance of rainforests is an especially important aspect that needs to be addressed in this context. These examples show just how complex the challenges are that we face.

Below, we provide an overview of the commodities upon which the German and European markets are especially focused, their unique features and the particular challenges along the supply chains.

Consumption by year and person

	Coffee:	166 litres
	Cocoa:	over 9 kg of chocolate
	Bananas:	12 kg
	Orange juice:	7 kg

Found in?

	Cotton:	in fabric and clothing
	Soy:	indirectly in eggs, milk and meat via livestock feed
	Palm oil:	in margarine, ice cream, biscuits, detergent, shower gel, lipstick
	Rubber:	in car tyres, condoms, disposable gloves, balloons



Ripe cocoa pods
can differ in colour
depending on the variety.



Cocoa

The persistent poverty of cocoa farmers and the advancing deforestation of tropical rainforests for cocoa production clearly illustrate the insufficiency of existing solutions. Over half of Côte d'Ivoire's forest has disappeared over the past 30 years.

Origin and production

The two leading cocoa-producing countries are Côte d'Ivoire and Ghana. There are currently 5.5 million people working directly in the cocoa farming sector globally who earn a livelihood for a total of 40 million people. 90 per cent of cocoa is grown by smallholder enterprises with an average farm size of 3.5 hectares. This corresponds to an area roughly the size of five football pitches. Despite the high level of demand, in West Africa, the main region of cultivation, only 30 to 50 per cent of the potential yield, that is, some 400 kilograms of cocoa beans, is actually harvested. Low productivity and poor quality result in farming families expanding their cultivation areas, which often leads to the clearance of valuable rainforest. Additionally, many farmers are not currently members of a cooperative, leaving them in a weak position as far as sales are concerned.

Role of Germany/the EU and consumption

As Germans, we consume nine kilograms of chocolate and food and drink items containing chocolate on average each year, and we spend an average of around 41 euros on these products. Germany is the world's third largest importer of raw cocoa. The EU's member states are together the world's largest importer, manufacturer and consumer of cocoa and chocolate products, accounting for some 60 per cent of raw cocoa imports globally. In this role, Germany and the EU bear a major responsibility for tackling human-rights and environmental challenges.

Price trends

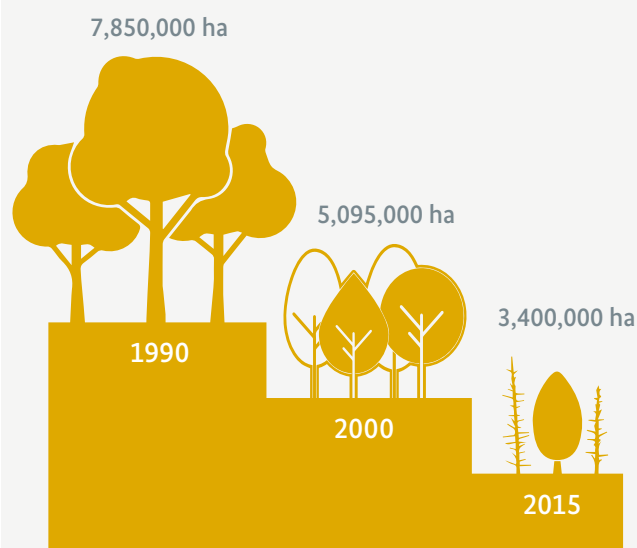
Global market prices have been very low and volatile since 2017. The causes of this include global surpluses, stock market speculation and fluctuations in weather conditions.

What are farmers left with?

Many cocoa-producing families in Côte d'Ivoire only earn around one third of a living income. Their incomes are heavily dependent on sales of their cocoa. The farmers' costs and the need to achieve a living income are not factored into the process of determining the market price.

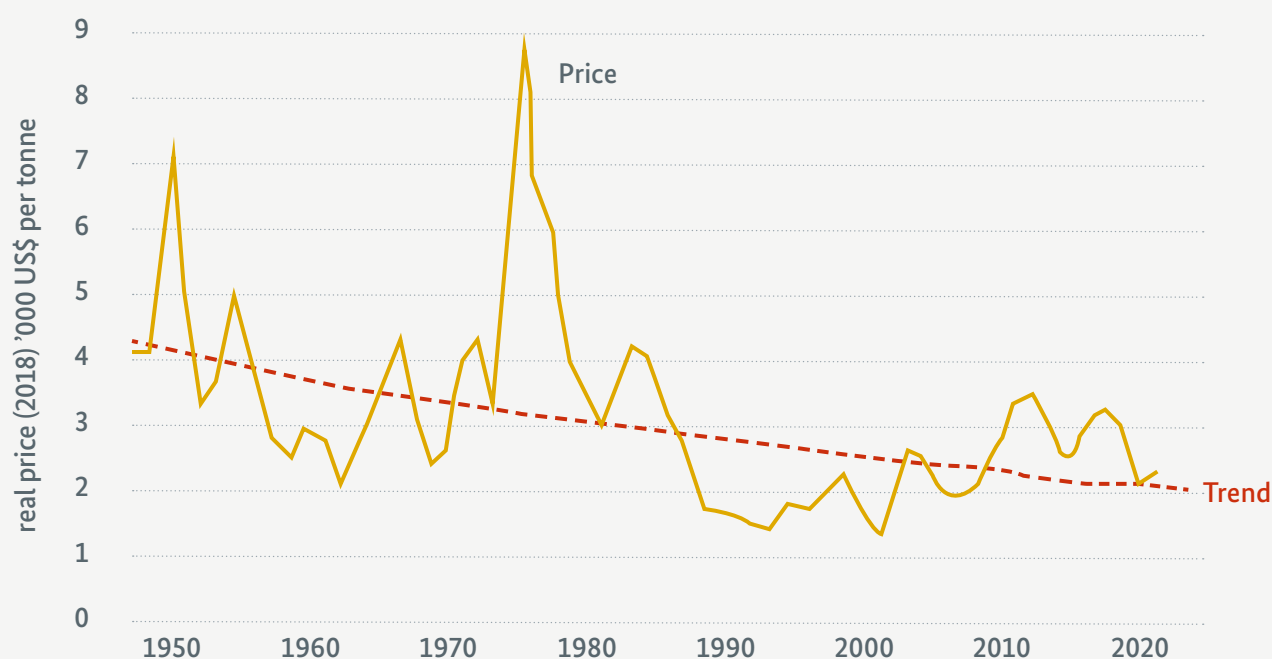
The concentration of power within the value chain generates a great deal of price pressure. Cocoa trade, the grinding process, chocolate production and retail are all under the control of a small number of large companies. The world's largest producer countries, Côte d'Ivoire and Ghana, determine the prices that farmers receive for their cocoa. They are allocated a specific proportion of the export price. The difference is channelled into the public purse for reinvestment in the sector. However, there is little transparency regarding the way in which the funds are actually used. Persistent poverty means that exploitative child labour continues to pose a major challenge.

COCOA – loss of forest in Côte d'Ivoire




Source: Food and Agriculture Organization of the United Nations (FAO) & Secrétariat Exécutif Permanent REDD+ (2017)

Cocoa – historic price trend



Source: Cocoa Barometer 2020, Südwind Institut



The coffee plant is grown in over 50 tropical countries.



Coffee

Some 25 million people worldwide work in the coffee sector. The commodity is often grown in countries with low levels of economic and social development, yet over half of the coffee produced globally is consumed in industrialised nations, including Germany. Low prices, rising production costs and climate change are the greatest challenges. Only 12 per cent of the coffee sold in Germany carries a sustainability label.

Origin and production

Coffee-growing activities are focused on 50 or so tropical countries in Latin America, Africa, Asia and Oceania. Of these, Brazil, Viet Nam, Colombia and Indonesia are the largest producers, accounting for 38 per cent, 18 per cent, 8 per cent and 6 per cent of production respec-

tively. Coffee offers significant income potential for rural populations in many developing countries. 70 per cent of the product is grown on family smallholdings.

There is scope for many producers to increase their incomes by managing their existing fields more effectively. Climate change is leading to a deterioration in growing conditions and a proliferation of pests and disease, which reduces yields and quality. While the initial steps for processing the dominant Arabica and Robusta varieties are mostly still carried out in the producing countries, the raw coffee is often roasted and refined in the consumer nations.

Role of Germany/the EU and consumption

As the world's second largest importer of raw coffee, Germany brought in 1.1 million tonnes of the commodity in 2019, primarily from Brazil and Viet Nam. A large proportion of this raw coffee

is processed for export. With an export value of 1.2 billion euros in 2019, Germany is one of the world's three largest exporters of roasted coffee, yet a great deal of coffee is also consumed in the country itself.

Consumption of real coffee stood at 166 litres per capita in 2019, higher than that of mineral water (142 litres) and beer (100 litres). Global coffee consumption has doubled in the last 35 years, and grown by an average of 1.1 per cent annually for the last four years. The increase in consumption has been especially marked in recent years in Africa (3.4 per cent), Asia (1.5 per cent) and North America (1.3 per cent).

COFFEE – price trend since 2015



Source: Macrotrends 2019 (www.macrotrends.net/2535/coffee-prices-historical-chart-data)

Global Coffee Platform (GCP)

There is a need for all actors along the supply chain, from producers to consumers, to adopt a comprehensive approach to tackling problems in the producer countries. Consequently, the BMZ has supported the Global Coffee Platform (GCP) since 2017 with establishing a national platform for promoting sustainable coffee farming in Kenya. The GCP is a global platform

with over 150 members from producer organisations, civil society, trade unions, retail and industry who advocate for sustainability in coffee-producing countries. The goals of the GCP are to improve living conditions for producers, boost their entrepreneurial success and conserve natural resources.

Drying coffee beans in Embu, Kenya.





Roasted coffee beans have a strong aroma.

Price trends

Regular overproduction due to good harvests has led in recent years to falling prices, which have been compounded by futures transactions. Coffee prices were 30 per cent below the ten-year average in 2019, the lowest since 2006. At the same time, production costs have been steadily rising. The drop in prices is putting the livelihoods of many coffee-producing families, and in particular of the many smallholder families, at risk. The proceeds are often insufficient to cover the production costs, let alone make investments, which are urgently needed for sustainable farming. This leads to a higher risk of poverty, exploitative child labour and migration to cities or other countries.

What are farmers left with?

The percentage of the final coffee retail price (roasted coffee) that reaches the coffee farmers varies greatly. In most cases, coffee producers in the country of origin are left with less than 10 per cent. For fairly traded coffee, the coffee cooperative receives a higher percentage of the sale price, which can be up to 26 per cent.

COFFEE – How much does a smallholder family earn?

It is estimated that a coffee farmer in Uganda receives just five to ten per cent of the shop price. This would be 25 to 50 euro cents for a shop price of 4.99 euros for 500 grams of conventional coffee.





Opened and fully ripened cotton boll



Cotton

As consumers of textiles and clothing, we should note that pollution, poverty and human-rights violations remain significant in conventional farming work and in the processing of cotton. Consequently, we promote greater sustainability along the entire textile value chain.

Origin and production

From the seed to the boll, cotton provides a livelihood for several million people around the globe. Cotton is produced by more than 100 million families in over 80 countries. Some 20 million people make a living from cotton farming in sub-Saharan Africa alone. 75 per cent of the total cotton produced is grown by smallholders in fields averaging between two and four hectares in size. The globe's

largest cotton-producing countries are India, China, the United States and Brazil. Six per cent of the world's cotton is harvested in Africa. Around 90 per cent of the cotton grown internationally is spun into yarn in China, India, Bangladesh and Viet Nam.

As an integral part of the highly internationalised textile and clothing sector, the cotton industry is characterised by a highly complex supply chain and

the large number of actors involved. While global production of sustainable cotton has been increasing steadily since 2012, it currently accounts for a market share of just 30 per cent.

Role of Germany/the EU and consumption

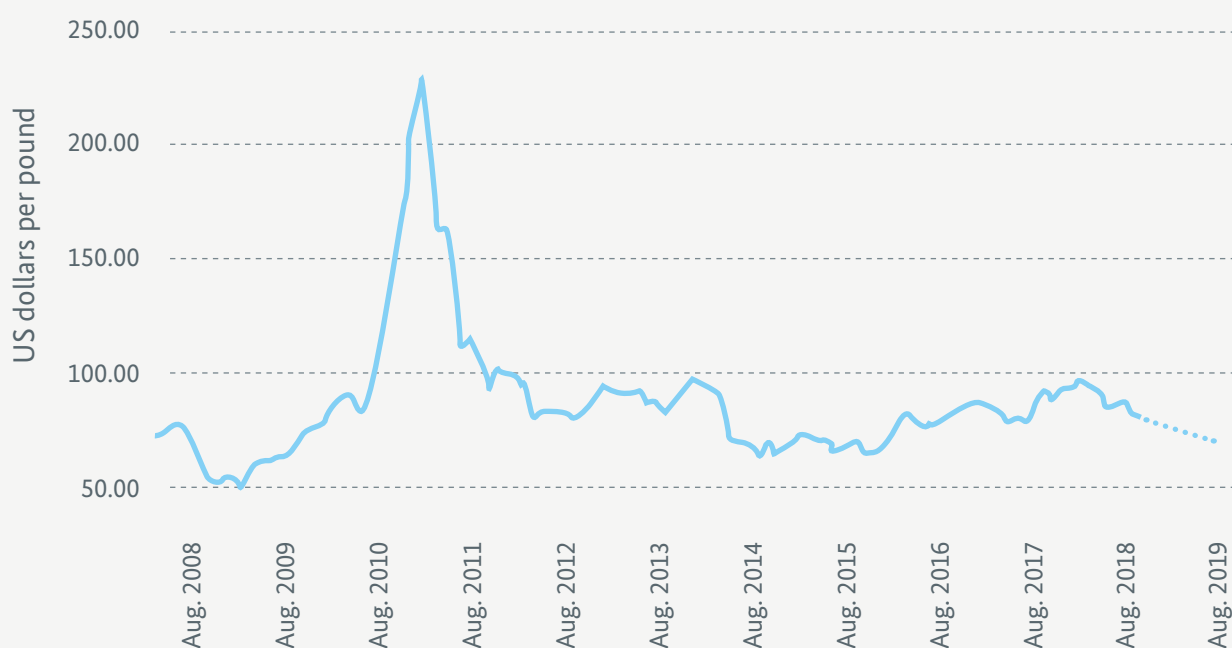
The cotton imported to Germany is almost exclusively found in finished textiles and items of clothing. Such imports are worth more than 15 billion euros a year. Over 90 per cent of the clothing items sold in Germany are manufactured abroad. Over 50 per cent of these items come from China, Turkey and Bangladesh. At the same time, every German throws away an average of 12 kilograms of clothing each year, which corresponds to approximately 40 items. German consumer behaviour influences the procurement strategies of the wholesalers and

retailers operating in the country, who then pass on the information obtained from consumers about product preferences, fashion trends, etc. in the form of orders for upstream industrial production. Our purchasing decisions thus play a key role in promoting sustainability along the entire textile value chain.

What are farmers left with?

Smallholder families producing cotton in developing countries are among the most vulnerable actors within the global textile value chain. The majority of smallholders cannot read or write, exploitative child labour is commonplace in the Asian textile sector as well as in African cotton fields, and most households are affected by poverty. Cotton is grown on tiny fields and almost entirely by hand. Smallholder

COTTON – price trend since 2008



Cotlook A Index / Source: Cotlook A Index & Primary Commodity Price System (IMF Data), 2019

Pointers for interpretation:

The Cotlook A Index presented is formed from quotations for effective cotton transactions from a number of producing countries and takes account of logistics, variations in quality, insurance, finance and payment processing. While the presented index is therefore closer to actual market events than the rate on the New York Stock Exchange for cotton futures contracts, as an average, it should not be considered an effective price. The final price depends on additional factors, such as country of origin, quality, terms and conditions of supply, and competition. Triggers for the price explosion between autumn 2010 and summer 2011 include a poor harvest in Pakistan, export restrictions and hoarding in India, and high demand from China.

families grow foods such as maize and millet for their own consumption and cultivate cotton as a cash crop from which to earn an income. The contractual partners dictate the purchase price that smallholders are paid for their cotton. Smallholders must contend not only with the high economic risks associated with cotton growing, but also with the major challenges posed by climate change to the livelihoods of smallholders in terms of changing precipitation cycles, soil degradation and the inappropriate use of pesticides.

Consequently, strategies for promoting sustainable cotton production pursue a holistic approach. Optimised cultivation processes lead to higher yields and reduce the need to use synthetic fertiliser and pesticides. Crop rotation preserves soils, taps new sources of income for smallholders and enables them to adapt to the impact of climate change.

COTTON – Cotton Made in Africa and GOTS

Cotton made in Africa (CmiA) is an internationally recognised standard for sustainable cotton produced on the African continent. The initiative of the Hamburg-based Aid by Trade Foundation (AbTF) has been working since 2005 to promote environmental conservation, and better working and living conditions for smallholders and for workers in the

ginning companies. CmiA reinvests the revenue from licences in Africa's cotton-producing regions. The Global Organic Textile Standard (GOTS) is the world's leading standard for textile processing of organically produced cotton. It also includes environmental and social criteria.



Smallholders grow cotton almost entirely by hand.





Natural rubber trickles from the rubber tree.



Rubber

Natural rubber is used in a great many products without which it is now virtually impossible to imagine our everyday lives. These include tyres, as well as latex gloves, condoms and mattresses. Approximately 1.3 million tonnes of natural rubber were used last year in the EU alone. Germany is the largest consumer of this commodity.

Origin and production

Natural rubber is the product of the rubber tree *Hevea brasiliensis*. Its environmental requirements mean that it can only be grown in the rubber belt on either side of the equator. Since the turn of the millennium, land use for rubber production has increased by more than 80 per cent to over 13 million hectares, with more than 90 per cent of rubber grown in South-East Asia. Thailand and Indonesia

are by far the largest producing countries. Other major producers include Viet Nam, China, India, Malaysia and the African nation of Côte d'Ivoire. The economic and social risks of cultivation are similar to those for palm oil, namely deforestation, the destruction of peat soil, conflicts over land rights and poor working conditions on large plantations.

Due to the high yield per hectare, natural rubber is usually grown as a monoculture, with industrial plantations playing a subordinate role, accounting as they do for less than 20 per cent of the growing space. Over 80 per cent of the world's rubber is produced in a labour-intensive process by smallholders, often in remote areas. This makes a significant contribution to employment, income diversification and economic development in many regions. Poor market access hinders the sale of the product and thus the generation of substantial profits. This is where the BMZ comes in with its initiative for deforestation-free supply chains in Indonesia. The goal of the support is to use the jurisdictional approach, that is, working with local administrations, to reconcile environmental conservation, sustainable agriculture and economic development in a given region.

Role of Germany/the EU and consumption

Around 1.3 million tonnes of natural rubber were used last year in the EU alone. With a total volume of almost 240,000 tonnes, Germany imports approx-

imately 19 per cent of Europe's raw rubber, making it by far the continent's largest consumer of the product.

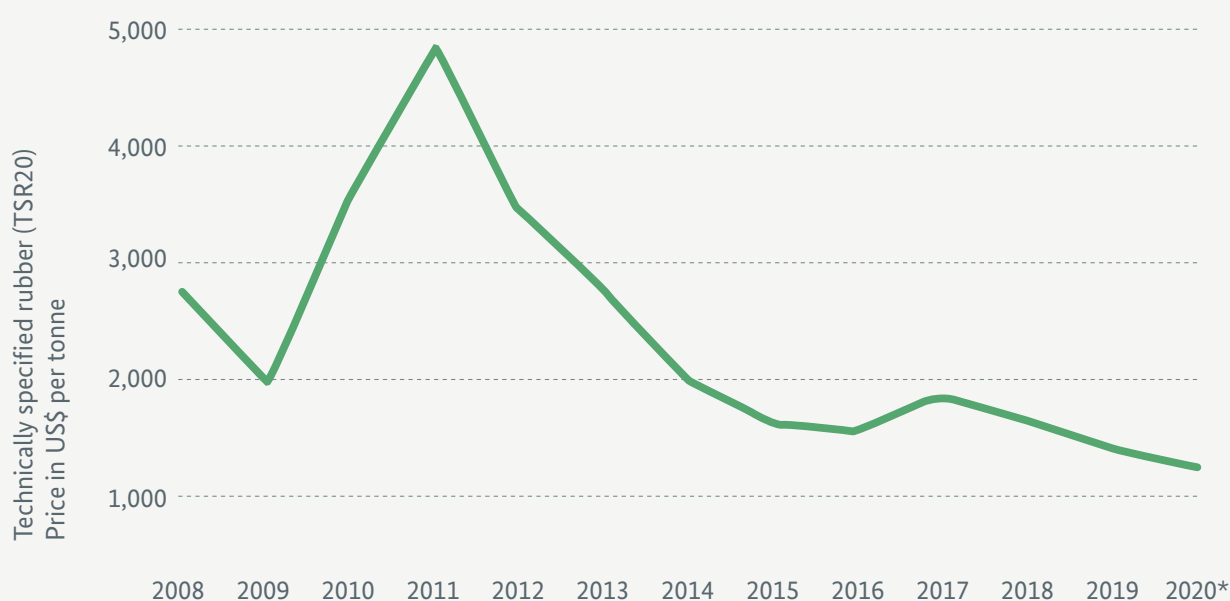
Price trends

Natural rubber prices are subject to marked fluctuation. They are dependent on global economic developments, with the automotive sector playing a key role, as it does in Germany. 75 per cent of the natural rubber produced worldwide is used to manufacture tyres.

What are farmers left with?

Smallholders are subject to marked fluctuations in global market prices. Additionally, supply chains are often long and lack transparency due to the many middlemen involved. This makes it difficult in most cases for producers to understand the pricing structures. It is thus important to develop the capacity of smallholders to improve the growing process and increase transparency along the value chain.

NATURAL RUBBER for tyre development – price trend since 2008



*Mean for January to April

Source: Singapore Stock Exchange 2019



Banana producers do not earn enough to pay their plantation workers a better wage.



Bananas

As Germans, we eat an average of 12 kilograms of bananas per year. They are our favourite fruit after apples. Germany is one of the world's largest importers of bananas. As a key product for enticing customers into supermarkets, they are the subject of price wars.

Origin and production

The world's largest banana producers are India, China, Indonesia and Brazil. These countries produce primarily for their own markets and to export to their neighbours. The main export-focused producers are Ecuador, the Philippines, Colombia, Costa Rica and Guatemala. Around 80 per cent of bananas are grown on plantations and the rest by smallholders. Bananas are the most traded fruit globally and a significant export fruit in Latin America and, increasingly, Africa. There is a need for action to change production conditions. The use of hazardous pesticides sprayed by crop dusting aircraft is damaging the health of people in the surrounding communities. The use of monocultures is harming the environment and is detrimental to biodiversity. Water pollution and soil degradation are other serious problems.

Role of Germany/the EU and consumption

Germany is the world's third largest importer of bananas. Over 80 per cent of the bananas imported to Germany come from three countries: Ecuador, Colombia and Costa Rica. Only a marginal propor-

tion are imported from West Africa (0.2 per cent from Cameroon, 0.1 per cent from Côte d'Ivoire).

Price trends

Bananas are subject to typical price fluctuations on global markets. Producers face high price pressure. Food retailers sell bananas at a low price to attract customers into stores. Despite being transported great distances, the fruit is often between 25 and 50 per cent cheaper than domestic apples. This results in low incomes for producers and a lack of investment in sustainability.

Current procurement policy

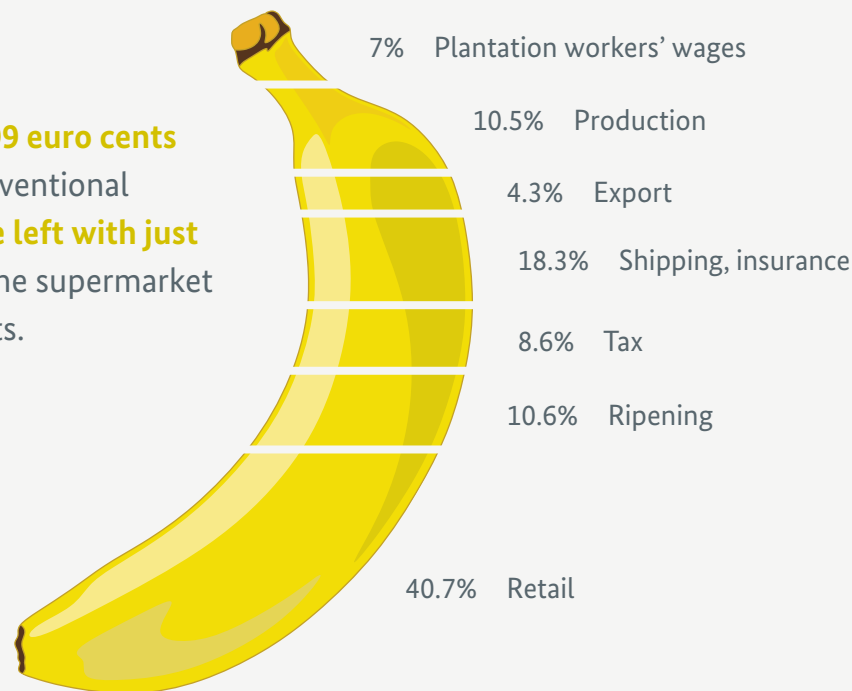
Despite great efforts to achieve sustainable pricing, the downward price spiral driven by food retailers has yet to be stopped. Consequently, GIZ is advocating for a re-think among companies and consumers. Examples of companies tackling this issue include the German Action Alliance for Sustainable Bananas (ABNB) and the German Retailers Working Group on Living Income and Living Wages within the Initiative for Sustainable Agricultural Supply Chains (INA).



Female worker at the Ejido Miguel Aleman banana plantation in Suchiate, Mexico.

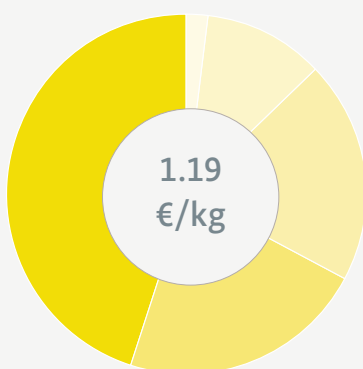
BANANAS – price structure in Costa Rica, a case study

At a selling price of **99 euro cents per kilogram** for conventional bananas, **workers are left with just 7 euro cents**, while the supermarket receives 41 euro cents.



Source: BASIC, 2015

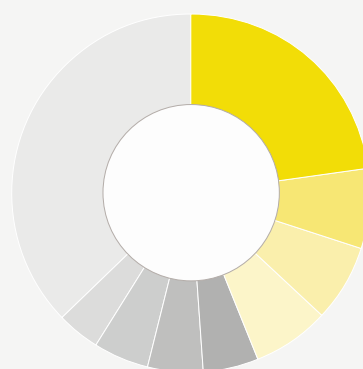
Price structure for Fairtrade-certified bananas



- 2% Fairtrade licence fee (retail)
- 11% Customs, ripening, packing, transport
- 20% Importers and shipping
- 22% Retail and wholesale
- 45% Producer organisation (including plantation workers' wages)

Source: Fairtrade, 2019

The largest importers of bananas



- 23% United States
- 7% Russia
- 7% Germany
- 7% Belgium
- 5% UK
- 5% China
- 5% Japan
- 4% Italy
- 37% Others

Source: ITC Trade Map, 2017



Ejido Miguel Aleman
banana plantation
in Suchiate, Mexico

What are farmers left with?

In many producer countries, restrictions are placed on workers' rights and on the right to form and join trade unions. Additionally, exploitative child labour still takes place despite great efforts to combat it. It is a consequence of the low wages earned by banana plantation workers, who receive just five to nine per cent of the selling price. The low wages result from the extremely low selling prices for bananas in supermarkets, as these prices make it impossible for producers to cover their production costs and pay their workers higher wages at the same time.

From a banana price of 99 euro cents per kilogram, producers receive just 11 euro cents and plantation workers just 7 euro cents. This falls far short of a living wage that would enable workers to enjoy a decent standard of living.

45 per cent of the final price of Fairtrade-certified bananas reaches the producer organisations. For a banana price of 1.19 euros per kilogram, this would be 54 euro cents. This would enable producers to pay plantation workers a better wage. In many cases, however, it would still not suffice for a living income.



Oil palms deliver the highest oil yields, while almost five times as much land is required for producing coconut, rapeseed and sunflower oil.



Palm oil

It is virtually impossible to imagine our everyday lives without palm oil. It is contained in many of the products that we consume on a daily basis, yet oil palm cultivation frequently leads to the destruction of old-growth forest, the loss of biodiversity and the release of greenhouse gases through cultivation on peat soil and as a result of forest fires. Consequently, an increasing number of European companies are choosing certified palm oil.

Origin and production

Indonesia and Malaysia together produce around 85 per cent of the world's palm oil. Other key producer countries are Thailand, Colombia and Nigeria. 73.2 million tonnes of raw palm oil and 19.4 million tonnes of palm kernel oil were produced on almost 28 million hectares of land in 2019/2020. This corresponds to 78 per cent of Germany's land area. Oil palms deliver the highest relative yields of oil

per unit of land. Coconut, oilseed rape and sunflowers require almost five times more land to produce similar yields. Rainforest continues to be destroyed to make way for oil palm cultivation. At 623,000 hectares per year on average (for the period from 2011 to 2018), Indonesia has the highest deforestation rate for old-growth forest in the world, though the country has significantly curbed forest destruction since 2016.

Role of Germany/the EU and consumption

Germany consumed almost 1.2 million tonnes of palm oil in 2017. A growing number of European consumers are opting for certified palm oil, which is having a positive impact. Less old-growth forest is being cleared and biodiversity is being protected. And because farmers are cultivating fewer oil palms on peat soil, fewer greenhouse gases are being released. The use of palm oil as biofuel is to be phased out in the EU by 2030. The EU no longer considers it sustainable within the meaning of the renewable energy directive. The BMZ is advocating for tariff preferences to only be granted for sustainable palm oil. It is working to ensure that companies use 100 per cent sustainable palm oil in consumer goods, animal feed and the chemical sector. In order for sustainable products to gain a foothold globally, it is necessary above all that demand for certified palm oil be increased around the world. In consumer countries such as India, Indonesia, China, Pakistan and Bangladesh especially, this is not yet the case.

What are palm oil producers left with?

For the producer countries, the palm oil trade is a key economic factor, encouraging investment in rural regions and creating jobs. Oil palm cultivation

is also worthwhile for smallholders, as the potential income per hectare is higher than that for maize, coffee and natural rubber. In Indonesia, the world's largest producer country, smallholder enterprises manage around 42 per cent of the palm oil production land. This number also includes smallholders that have contractual links to larger firms or sell their products to these firms. Only around 22 per cent of Indonesia's land is farmed by independent smallholdings. These enterprises achieve lower oil yields per hectare on average as a result of poorer access to training, loans and good plant material.

Sustainable palm oil production

Almost 20 per cent of the world's palm oil production is certified in accordance with the Roundtable on Sustainable Palm Oil (RSPO), the International Sustainability and Carbon Certification (ISCC), the Rainforest Alliance or the Roundtable on Sustainable Biomaterials (RSB). 83 per cent of the palm oil consumed in Germany carried such certification in 2019. Unfortunately, it is precisely in key consumer countries such as India, Indonesia, China, Pakistan and Bangladesh that demand has not yet arisen for sustainable palm oil production.

PALM OIL – Areas of use in Germany

Palm oil consumption in Germany, 2019: 1.26 million tonnes



Source: Meo Carbon Solutions 2021

However, only a tiny proportion of smallholders have been certified to date. The costs are too high for them. Additionally, they rarely receive sufficient support to prepare for certification. In

order to reduce obstacles and integrate smallholders into the global value chain, the RSPO has introduced a standard for independent smallholders.

PALM OIL

FONAP

The Forum for Sustainable Palm Oil (FONAP) is a multi-stakeholder partnership comprising some 50 companies, associations, non-governmental organisations, the German Federal Ministry of Food and Agriculture (BMEL) and the German Federal Ministry for Economic Cooperation and Development (BMZ). The goal is to increase the proportion of sustainably produced palm oil on the German market (in the food, animal-feed and chemical sectors), improve existing standards and certification schemes, and help to ensure compliance with human rights along the entire supply chain.

FONAP has been advocating for more sustainable palm oil production in the countries of origin since 2013.

The members of FONAP have made a voluntary, public commitment to using only 100 per cent sustainably produced palm (kernel) oil in their products. Supporters of FONAP commit to promoting sustainable palm oil products by verifiably and ambitiously increasing the proportion of certified goods each year. The companies get involved in order to jointly tackle challenges such as fulfilling their human rights due diligence obligations and certification issues, and not only within their own walls.

The Roundtable on Sustainable Palm Oil – RSPO

The Roundtable on Sustainable Palm Oil (RSPO) is a multi-stakeholder initiative, which was launched in 2004. The founding members include the World Wide Fund For Nature (WWF), Unilever, Migros and the Malaysian Palm Oil Association (MPOA). The RSPO now has over 4,970 members worldwide and represents all actors in the palm oil sector: palm oil producers, processors and traders, producers of products for consumption, retailers, banks and non-governmental organisations.

Principles and criteria for sustainable palm oil production have been developed since 2004. These principles are as follows:

1. Behave ethically and transparently
2. Operate legally and respect rights
3. Optimise productivity, efficiency, positive impacts and resilience
4. Respect community and human rights and deliver benefits
5. Support smallholder inclusion
6. Respect workers' rights and conditions
7. Protect, conserve and enhance ecosystems and the environment

A total volume of 17.2 million tonnes, or 19 per cent of global production, was certified in accordance with the RSPO in 2020. The majority of the world's certified palm oil comes from Indonesia (51 per cent), followed by Malaysia (42 per cent). The rest is sourced from Papua New Guinea, Colombia and Brazil.

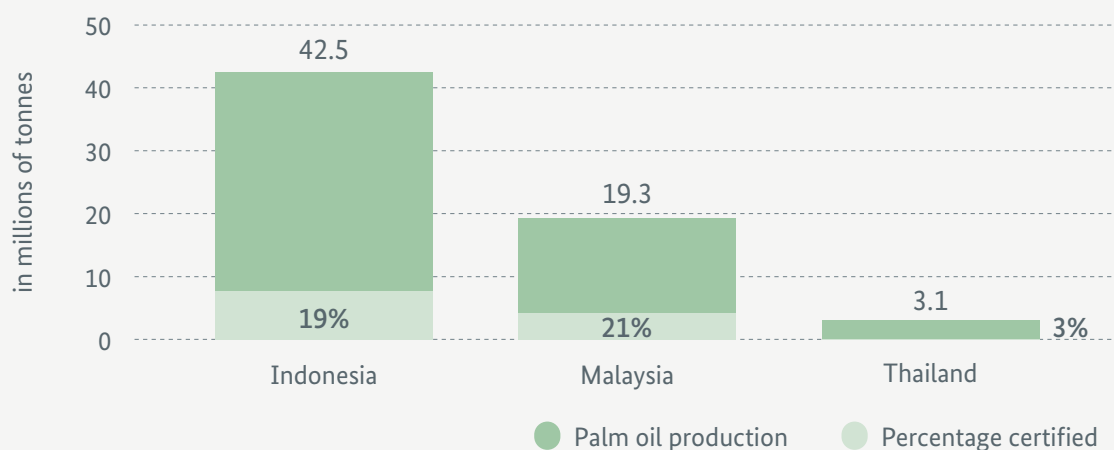
The RSPO uses a range of mechanisms to support smallholders. A simplified standard has been in operation for independent smallholders, training has been provided and a support fund has been in place since 2019.





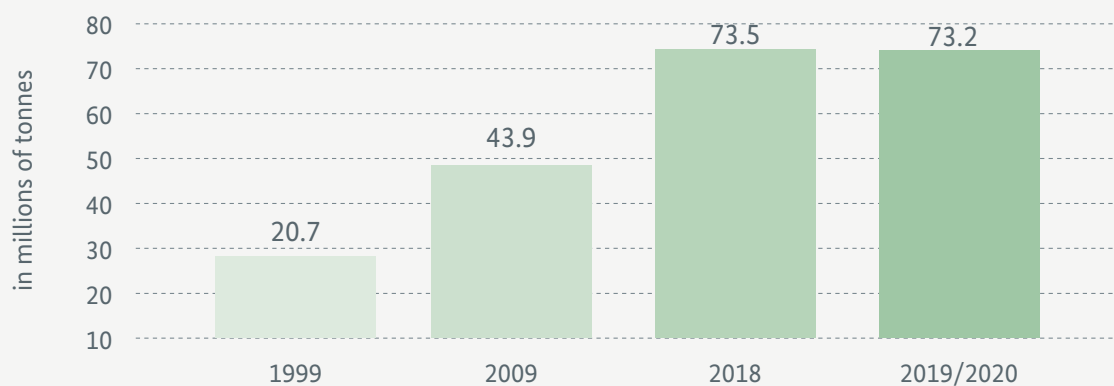
Harvesting the fruit of an oil palm

PALM OIL – Main producer countries 2019/2020



Source: rspo.org

PALM OIL – Annual global production



Source: FAO



Soy beans are primarily used to derive meal for animal feed.



Soy

Soy plays a key role in the production of meat, milk and eggs, thanks to the high protein content of the legume. Over 80 per cent of the soy produced globally is used as feed for poultry, pigs, cattle and fish. At the same time, soy is still the number one driver of agricultural deforestation.

Origin and production

Three countries, namely the United States, Brazil and Argentina, produce 80 per cent of the world's soy. The area of growing land increased to 127.5 million hectares globally in 2020/2021, which is more than three and a half times the size of Germany. A total of 361 million tonnes was produced. In 2018, the EU imported almost

10 per cent (9.5 per cent) of the soy produced worldwide. Increasing prosperity and meat consumption, especially in China, are creating greater demand for soy. Compared with other sources of protein, soy has the most efficient protein yield per hectare.

While its production has brought investment to many rural regions, this has come at great cost to society and the environment. Soy cultivation contributed to the deforestation of 13 million hectares between 1990 and 2008. This represents around 19 per cent of all deforestation caused by the expansion of agricultural land. Only beef production is a larger driver of forest destruction. The countries most affected by the practice are Brazil, Argentina, Paraguay and Bolivia.

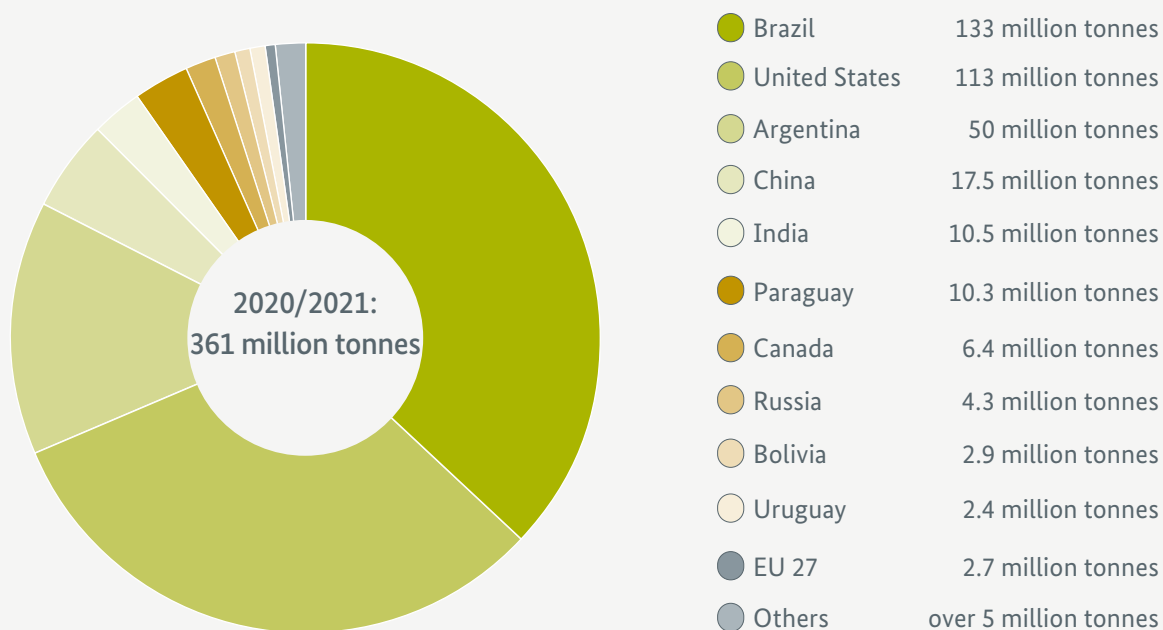
The soy plant can be used effectively in crop rotation with maize, for instance, helping to improve soil quality. However, soy production in Latin America is usually large-scale, highly mechanised and involves significant use of pesticides. It is not uncommon for traditional land users to be displaced in Latin America. Six major retail companies share over half of the soy exports from Argentina and Brazil between them. 78 per cent of the soy produced globally is genetically modified. These varieties are not permitted to be grown within the EU, but it is permitted to import a number of approved varieties.

Role of Germany/the EU and consumption

Almost 10 per cent of the soy produced around the world in 2017 has been used by European Union member states. Of the 34.4 million tonnes of the product it used, Europe produced just 2.8 million tonnes itself. Germany imported over 6.1 million tonnes of soy beans and meal in 2018, consuming around 4.1 million tonnes domestically. An estimated 2.1 million hectares were used to produce these imports, an area as large as the German state of Hesse. 47 per cent of these imports in 2018 were certified in accordance with the FEAC guidelines and 22 per cent were certified deforestation-free.

Between 75 and 80 per cent of soy beans are processed into soy meal, which is used almost exclusively in animal feed. As a protein-rich feed, soy is now part and parcel of meat and milk production processes. Meat consumption thus has a direct impact on the clearance of rainforest. Soy beans are crushed to produce soy meal and soy oil. The latter is used as cooking oil or processed into biodiesel.

SOY – Global production



Source: USDA

Incidentally, as humans, we consume just six per cent or so of these soy beans in the form of tofu, soy milk and soy sauce.

Just 45 per cent of the soy used in Germany met the requirements of the European Feed Manufacturers' Federation (FEFAC)'s Soy Sourcing Guidelines in 2017. Soy that has been certified deforestation-free accounted for just 16 per cent or so of the total product used in Germany.

Sustainable soy production

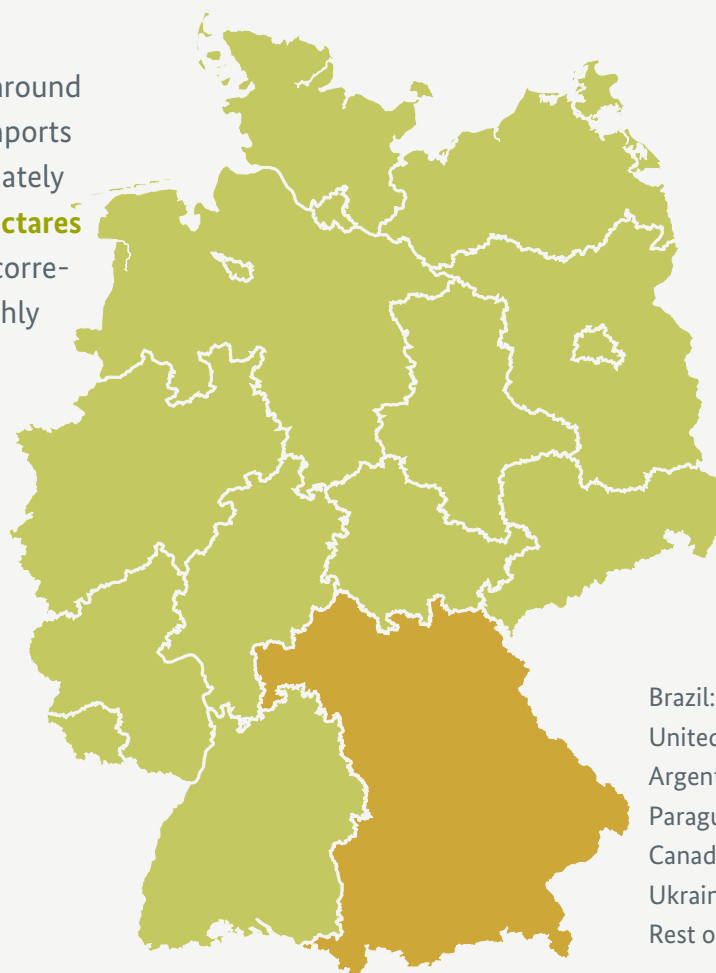
The advance of deforestation in the Amazon region has been significantly curbed since 2006. Virtually all the major players in the supply chain declared their willingness to cease purchasing soy that had been produced on cleared rainforest

land. However, over the last few years, rates of deforestation in the Amazon region for other land use have risen once again.

Additionally, soy production has expanded beyond the Amazon region to the savannahs in north and north-east Brazil (Cerrado) and the Gran Chaco in Argentina and Paraguay. These regions are also home to rich biodiversity that is being destroyed by these activities. Soy is largely used in animal feed and thus indirectly consumed by humans when we eat and drink animal products. It is very difficult for consumers to identify how sustainable this feed is, and they are barely calling for the use of sustainable soy as feed.

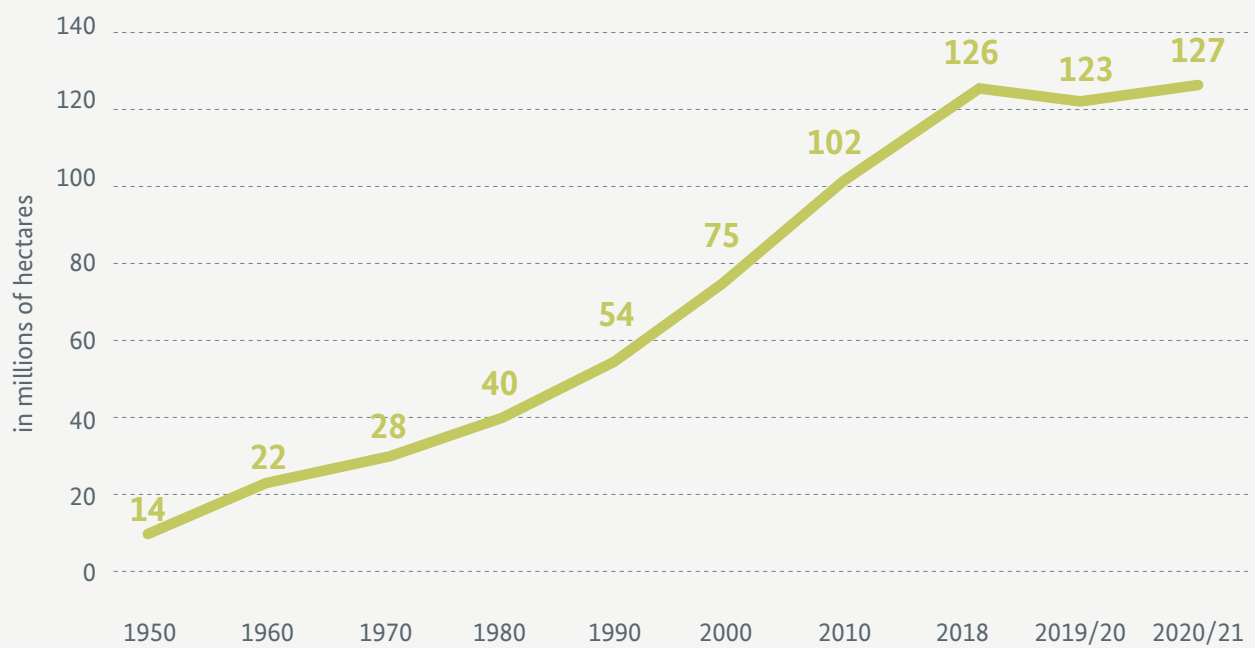
SOY – land used for EU's soy imports.

The EU used around **10.5 million hectares** around the world for its soy imports in 2018, with approximately **6.8 million of those hectares** in Latin America. This corresponds to an area roughly the size of Bavaria.



Brazil: 4.1 million ha
 United States: 2.5 million ha
 Argentina: 2.2 million ha
 Paraguay: 0.5 million ha
 Canada: 0.4 million ha
 Ukraine: 0.3 million ha
 Rest of the world: 0.6 million ha

SOY – Increase in global growing land



Source: FAOSTAT and USDA



The pods of the soy plant



Production in the
textile industry

5. Prospects

German and international companies should take on greater responsibility for the environment and people in other parts of the world. We could support this by promoting closer relationships between companies and producers. But these alone are not enough. EU-wide legislation could help companies to meet their due diligence obligations. At the same time, we need to assist local governments with creating frameworks for greater sustainability.

What needs to happen next

Involve actors in partner countries more closely

Companies need to take action locally. German and international firms must not rely solely on their suppliers, but rather take action themselves in the partner countries to promote living incomes and living wages. The price war between German companies and supermarkets must not be waged on the backs of smallholders in partner countries. It is good when pioneering companies launch their own initiatives, but together we can bring about more systematic change. We can establish multi-stakeholder partnerships in producer countries that engage in regular dialogue with multi-stakeholder partnerships in Germany. This helps to make German actors more aware of where they can engage in joint initiatives and gives producers in partner countries a better understanding of the requirements in consumer nations. Partner governments and local civil-society organisations, such as smallholder associations, also need to be involved to a greater degree. Unless there is change in the policy frameworks of partner countries, there will be no sustainable change in supply chains. Companies want to know whether they can count on governments that are committed to developing sustainable production regions. At the same time, district authorities need to understand the value that is added when they are willing to engage in

more sustainable land-use planning and when they give local actors an opportunity to provide their input.

Establish binding rules in consumer countries

Voluntary commitments and multi-stakeholder partnerships are not always sufficient for achieving a fair distribution of responsibilities in Germany for sustainability in supply chains. In these cases, legislation can be used to ensure that all companies take on responsibility. For many years, the German government had relied on companies making voluntary commitments to implementing the UN Guiding Principles on Business and Human Rights in Germany. Monitoring by independent service providers revealed a clear failure to achieve the goals. The coalition agreement provided for intervention by the German government in such cases. This was achieved by the German Bundestag adopting the Supply Chain Due Diligence Act (LkSG). In this way, Germany has for the first time set out binding rules as to what companies must do to protect internationally recognised human rights. For the individuals in the supply chains, the LkSG affords greater protection of their social rights and thus greater participation in global economic growth. This creates legal clarity and legal certainty for the companies. The LkSG forms part of a smart mix of obligatory and voluntary measures in all areas of supply chains. The BMZ will continue to work on implementing these measures.

PUBLISHED BY THE

German Federal Ministry for Economic Cooperation and Development (BMZ), Division 122 -
Sustainable agricultural supply chains, International agricultural policy, agriculture, innovation

EDITED BY

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

DESIGN AND LAYOUT

wbv Media, Bielefeld; EYES-OPEN, Berlin

PRINTED BY

BMZ

Printed on Blue Angel-certified paper

PHOTOS

Cover: Monty Rakusen/gettyimages.de;

Inside cover, p. 18, 23, 27, 34, 40, 48, 49, 51, 55: Ute Grabowsky/photothek.net;

p. 2, p. 4: Bluesky60/stock.adobe.com; p. 6, 40, 46: Michael Gottschalk/photothek.net; p. 8, 10: Silvia Truessel/stock.adobe.com;

p. 15: tanrock Gaphoto/gettyimages.de; p. 21, 30, 36, 60: Thomas Imo/photothek.net; p. 22: Gael Gellé/GIZ; p. 25: Dorothea

Hohengarten/GIZ; p. 29: Thomas Koehler/GIZ; p. 31: subman/gettyimages.de; p. 32: Thomas Heinen/GIZ; p. 33: Chaay_tee/stock.

adobe.com; p. 38: joloei/stock.adobe.com; p. 41: wundervisuals/gettyimages.de; p. 42: Nikhil V. Patil/stock.adobe.com;

p. 44: bonga1965/shutterstock; p. 45: Joerg Boethling/visualindia.de; p. 52: oneinchpunch/stock.adobe.com; p. 56: nnattalli/

shutterstock.com p. 59: Hassyoudo – stock.adobe.com

AS AT

September 2021

BMZ OFFICES

→ BMZ Bonn

Dahlmannstraße 4

53113 Bonn, Germany

T +49 228 99535-0

F +49 228 99535-3500

→ BMZ Berlin | Im Europahaus

Stresemannstraße 94

10963 Berlin, Germany

T +49 30 18535-0

F +49 30 18535-2501

CONTACT

poststelle@bmz.bund.de

www.bmz.de