

Systematically laying the foundations for a sustainable food system is essential

Recommendation of the German Council for Sustainable Development (RNE) for the State Secretaries' Committee for Sustainable Development on 8 June 2020

Berlin, 30 April 2020

On 8 June, the State Secretaries' Committee will address the topic of the sustainable development demands made of the food system. Simultaneously, the Federal Government is planning to further develop the German Sustainable Development Strategy between now and April 2021. Moreover, the COVID-19 pandemic is demonstrating on a daily basis just how closely interwoven the economic, social and environmental systems are. Both now and in the future, the global food system will have a key role to play in offering the global population healthy and diverse nutrition, preserving biodiversity and protecting the climate. There are therefore levers that can be adjusted in Germany's contribution to a sustainable global food system. The foundations for a sustainable food system must be systematically laid with the active shaping of networking both in Germany and the European Union as well as in other regions around the world from which we source raw materials and goods and to which we export foodstuffs. To achieve this radical and complex modification of the food system, transformation and coherence processes must now be resolutely introduced throughout the Federal Government.

There are currently two billion people facing food insecurity and 820 million people suffering from chronic undernourishment (hunger). In addition, the number of people who are overweight or obese is on the increase everywhere. Two billion adults and 40 million children under the age of five are overweight. Measures to combat this need to be implemented in all countries. In developing countries, the distribution channels for small businesses and also social security systems need to be expanded, while globally, the negative impacts of food systems on the climate and the environment must be reduced by means of improvements being achieved throughout the value chain, food loss being minimised and, in the affluent countries in particular, nutrition based on foods sourced from livestock farming being reduced.

It is widely known that there is a serious need for action here, including in Germany – the Federal Government’s analysis at the end of 2019 of the achievement of the sustainability indicators came to the conclusion that there was a negative or slow trend regarding the majority of the indicators related to the food system. At the global level, the Global Sustainable Development Report (GSDR) published in September 2019 confirmed that it would take a comprehensive reorganisation of the food system for its negative social, health and environmental effects to be eliminated. The report names sustainable food systems as one of four key entry points for realisation of the 2030 Agenda.

In addition to individual analysis, the GSDR contains valuable information on trade-offs and synergies between the individual goals. Regarding SDG 2 Zero Hunger, for example, achieving this goal would have positive impacts on the achievement of other goals such as eradicating poverty (SDG 1) and well-being for all (SDG 3). At the same time, food production often conflicts with other goals, in particular water management for people (SDG 6), production and consumption (SDG 12) and protection of the climate, biodiversity and land (SDGs 13, 14 and 15). Meanwhile, gender equality (SDG 5) is a very important prerequisite for eradicating hunger and malnutrition and for making smallholdings in many countries more productive. One of the primary conclusions is therefore this: if measures only focus on the achievement of individual goals, this can jeopardise implementation of the 2030 Agenda in general. Consequently, the individual political arenas must work together coherently. Each measure must be considered in terms of its impacts on the goals as a whole, rather than on the indicator in question. Potentially conflicting aims need to be identified and minimised.

The reports of other international institutions regarding the current food security situation likewise indicate that SDG 2 cannot be achieved if the current trends continue and that the reasons for this lie in the areas of action of other SDGs: the UN’s 2019 State of Food Insecurity (SOFI) report documented rising hunger figures for the third time and listed social inequality, climate change and the loss of biodiversity as problems. In its 2019 global report, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) named farming as one of the main drivers of the loss of biodiversity around the world. The Intergovernmental Panel on Climate Change (IPCC) documents the production and consumption of food as being key drivers of the climate crisis. All of this is exacerbating the precarious situation of people living in poverty around the world.

A clear target image for sustainable food systems is essential if the necessary and far-reaching transformation of food systems across all sectors is to be achieved.

The German Council for Sustainable Development (RNE) wishes to promote such a target image that defines sustainable food systems as the safeguarding of sufficient and healthy nutrition for all. In other words, food systems which are bound by the principles of food sovereignty, a right to food and the preservation of ecological resources as the foundation for life. Systems which ensure resilience to external shocks such as climate change or pandemics without jeopardising the social, economic and environmental bases of food production for future generations in the process.

In accordance with this target image, changes in the food systems can be accounted for by monitoring holistically trends in the following dimensions:

- Hunger and malnourishment
- Poor nutrition, obesity and excess weight
- Food loss and waste
- Level of greenhouse gas emissions due to changes in land usage for farming purposes and for food production, consumption and transport
- Degree of resource productivity of food production
- Loss of biodiversity and the quality of natural resources (water and soil)

The RNE therefore recommends that the Federal Government weigh up more strongly than to date the trade-offs and synergies associated with the following Sustainable Development Goals with respect to food systems: (i) SDG 2 Zero Hunger, (ii) SDG 3 Good Health and Well-Being, (iii) SDG 6 Clean Water and Sanitation, (iv) SDG 8 Decent Work and Economic Growth, (v) SDG 12 Responsible Consumption and Production, (vi) SDG 13 Climate Action, (vii) SDG 14 Life Below Water and (viii) SDG 15 Life on Land.

All the indicators for these Sustainable Development Goals within the German Sustainable Development Strategy currently indicate a negative or an overly slow trend. A swift start to a gradual and systematic reorganisation of the food system in, with and by Germany is needed in order for implementation of the 2030 Agenda to be achieved.

Overview of the RNE's modification recommendations for food system indicators within the German Sustainable Development Strategy:

SDG	Current Indicator	Current Trend	RNE's recommended supplementations	RNE's recommended actions
Zero Hunger (SDG 2)	2.1.a Nitrogen surplus in land used for agriculture	Negative	Shift to SDG 6	<ul style="list-style-type: none"> - Greater transparency and enforcement of fertilisation regulations - Reorganisation of livestock farming based on the recommendations of the Borchert Commission
	2.1.b Organic farming of land used for agriculture	Overly slow growth	Also incorporate other certified sustainable management systems in addition to the 20% organic farming in 2030	<ul style="list-style-type: none"> - Build up an accreditation system for sustainable management systems and align it with the Common Agricultural Policy (CAP) - Improve marketing, ensure funding of the expansion of organic farming in the next CAP funding period (first and second pillar, expansion by 2030) - Promote public procurement of organic food - Increase research funds to at least 20% of agricultural research funds
	2.2 Contribution to global food situation	Not representable	New additional indicator of the land footprint of German food consumption	Commission indicator, models for all political fields
Good Health and Well-Being (SDG 3)	3.1.e Obesity rate among young people	Not currently representable	New indicator with data collected EU-wide	
	3.1.f Obesity rate among adults	Negative		Nutritional advice, levies on animal products

	3.2.a Emissions of air pollutants	No improvement	Ammonia emissions in accordance with NERC ¹	Funding of emission reduction facilities, "TA Luft" ²
Clean Water and Sanitation (SDG 6)	6.1.a Phosphorus in flowing waters	No improvement	Shift to SDG 14	Erosion protection, buffer strips
	6.1.b Nitrate in groundwater	No improvement	Replace with nitrogen balance surplus (previously SDG 2)	
				<ul style="list-style-type: none"> - Manage virtual water consumption responsibly (enshrine in supply chain legislation) - Protect fossil water resources
Decent Work and Economic Growth (SDG 8)	8.1 Total raw material productivity			<ul style="list-style-type: none"> - Set an absolute raw materials consumption target - Sufficiency policy in all areas of need (housing, nutrition, mobility, communications, etc.)
			Can additionally be represented via a new land footprint indicator	Promote a rigorous circular economy and cascade utilisation (e.g. expanded deposit system)
Responsible Consumption and Production (SDG 12)	12.1.b Energy consumption and CO ₂ emissions from consumption	No improvement	Emissions trading within food production too	
	12.2 Sustainable production/EM AS eco-management		Certified sustainable production systems in the agricultural sector too	See organic farming

1 National Emission Reduction Commitment

2 Technical Instructions on Air Quality Control

			Development of a food waste indicator	<ul style="list-style-type: none"> - Technical and digital solutions - Economic incentives (e.g. waste tax) - Review the grading system
			Development of a food transport and processing indicator	
			Development of an indicator for accessibility of sustainably produced foods	<ul style="list-style-type: none"> - Proactive marketing policy - Reduced VAT rates for sustainably produced foods
Climate Action (SDG 13)	13.1.a Reducing greenhouse gases	No improvement	Emissions trading within food production too	
			New indicator of changes in carbon capture within agricultural and forestry production systems	
Life Below Water (SDG 14)	14.1.a Nitrogen input via the inflows into the North Sea and Baltic Sea	No improvement	Incorporate phosphate	<ul style="list-style-type: none"> - Focus on moorland management, fertilisation, methane - Creation of riparian strips and erosion protection measures
			Supplement the global indicator	Reduce the importing of fish and seafood from aquaculture and fish farming by 70%
			New indicator of imports of fishmeal equivalents	
Life on Land (SDG 15)	15.1 Species diversity and 15.2 the eutrophication of ecosystems	No improvement		<ul style="list-style-type: none"> - Expand species conservation in the CAP reform - Promote biotope networks

			New soil fertility indicator	
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The RNE recommends taking the following action to increase policy coherence and to ambitiously, extensively and rapidly advance transformation of the food systems in, with and by Germany:

- Work at the national level in Germany on new requirements of sustainable food systems should be closely correlated with the work being performed on this internationally. For example, the Committee on World Food Security (CFS) is currently developing Voluntary Guidelines on Food Systems and Nutrition. These guidelines were due to be adopted at the next CFS plenary session in October 2020, but this is likely to be postponed for a year due to the COVID-19 pandemic. This process is an important step in defining and negotiating the necessary political changes within the food systems in order for SDG 2 and other SDGs to be achieved.

It is important that development of the guidelines focuses on those who are especially affected by hunger and malnourishment. At the same time, human rights must be defined as an overarching guiding principle. This should not be limited to the human right to food – the relation to other rights such as women’s rights, the right to good health or access to natural resources (woodland, waters, land) must be established, thereby recognising the indivisibility of human rights.

The guidelines must adopt a systemic perspective of the various areas within food systems. Agricultural land usage within local and global limits is key here.

It is important that the guidelines clearly state inconsistencies which stand in the way of food security and the right to food (e.g. the impacts of trade and investment policies on the global food situation, a lack of protection of smallholder distribution systems, violation of fishing ground access rights) as well as where responsibility for these lies. The leadership role of governments must be made clear here – it is they who must establish a clear framework for the coherent management of the various political fields.

- As part of its Presidency of the Council of the European Union in the second half of 2020, the Federal Government should coordinate the European position on food systems within the CFS and present this in Rome. The food crisis likely to be caused by COVID-19 and the reactions to this must be at the heart of the German presidency. The Federal Government should support the FAO’s likely postponement of the Voluntary Guidelines on Food Systems and Nutrition in order that the lessons learned from the COVID-19 crisis can also be incorporated.
- The RNE explicitly welcomes the establishment of a Future Commission on Agriculture. We recommend that this commission be charged with achieving a clear goal in line with the target image presented here and that the administrative office be placed directly under the auspices of

the Federal Chancellery due to the broadness of the topic. The mandate should allow various scenarios and courses of action for a transformation to be developed. Broad representation of German and international stakeholders with strong ties with the right to food as well as youth representatives should also be guaranteed.

- The recommendations of the Borchert Commission's competence network for livestock farming should be discussed in depth by the agricultural policymakers as quickly as possible, with the reorganisation of livestock farming subsequently being initiated. The RNE recommends that the Future Commission on Agriculture be mandated with identifying ways in which the sustainability strategy indicators for agriculture and sustainable food systems can be reached by 2030. This will require a consensus being achieved within the commission regarding reorganisation steps and funding.
- The RNE recommends that additional instruments be developed to facilitate transformation of the food systems in Germany, in particular instruments that (i) send price signals that generate demand, (ii) also guarantee funding of the necessary measures outside of tax revenue and (iii) incorporate environmental and social (external) costs into prices, for example by creating a regulatory framework for the accreditation of sustainability assessment systems in order to make the social, environmental and regional economy achievements of businesses visible and also recognise them, including for food industry businesses. This also entails external effects being recognised (true cost accounting).
- The COVID-19 pandemic could trigger a global food crisis. A regulatory framework therefore needs to be put in place right now in order to offer farmers around the world planning reliability and to prevent food speculation.

Our recommendations repeatedly make positive reference to the fact that the sustainability, carbon intensity, and land and water footprints of foods, including those which are imported, need to be assessed and taxed. At all times, this must take into account the principle of the special or preferential treatment of developing countries as applied by the UN, for example in the Paris Agreement, and also by the WTO. It must also be avoided that comparative cost advantages of the poorest countries and their trading preferences when exporting to the EU are undermined by measures implemented for achievement of the sustainability indicator targets. This applies in particular to the action recommended in relation to SDG 12 Responsible Consumption and Production.

Strengthen the individual dimensions of the food system with indicators and ambitious targets and implement them in a coordinated manner!

(i) Zero Hunger (SDG 2)

In Germany, the indicators for SDG 2 relate to eco-friendly farming and Germany's contribution to the global food situation. The trend for a nitrogen surplus is negative. Further measures need to be

implemented other than the recent amendment of the Fertiliser Application Ordinance (DüV). The RNE proposes that the recommendations of the Borchert Commission³ regarding the reorganisation of livestock farming and a transparent and digital reporting system be followed, among other things to close nutrient cycles. Additionally, market regulation measures are needed in order to reduce the use of nitrogen. Livestock farming based on animal density per area is key. The indicator has considerable significance for SDG 6 (Clean Water) and should be assigned to this.

The indicator for organic farming likewise suggests that the goal of more than 20% of agricultural land being organic by 2030 will be missed based on current developments. The RNE proposes that research funding for organic farming be increased (in the future, at least 20% of agricultural research funds). The promotion of organic farming must be enshrined in all areas of the CAP in such a way that there are sufficient funds available for achievement of the land usage target. Alongside an increase in land usage, the markets for organic produce need to be developed.

One of the levers here is public procurement, which needs to more strongly prioritise organically produced food in canteens and at public institutions in the future.

Food should be priced in such a way that sustainably produced food can be purchased more frequently. For this, the land productivity of organic farming needs to be increased, for example by means of improved access to nutrients and cultivation progress. Other forms of especially sustainable farming should be promoted if they submit to a transparent, state-supervised assessment system.

The “Contribution to global food situation” indicator first and foremost maps payments made to developing and emerging countries in order to support good government leadership on food security. No trend can be stated for this input indicator. The RNE therefore proposes that an additional indicator be introduced representing Germany's land usage abroad. An indicator would need to be developed that represents global land usage relating to German consumption. The Federal Environment Agency's “Development of consumption-based land use indicators” synthesis report⁴ offers an approach for this indicator as a contribution to the German Sustainable Development Strategy. This indicator is also of major significance to SDGs 6, 12, 13 and 15. Changes in land usage due to the growing of feedstuffs, energy crops and other biological resources result in considerable amounts of greenhouse gases being released into the atmosphere, pose a threat to biodiversity and contaminate water resources in other parts of the world. In view of Germany's bioeconomy strategy, this external land usage is at risk of increasing further in the future.

The importing of feedstuffs made from protein crops (e.g. soya meal) and energy crops (e.g. palm oil) is often associated with grave environmental and social consequences in the producing countries. Reducing the importing of feedstuffs and energy crops from countries where there is hunger does not

³ https://www.bmel.de/SharedDocs/Downloads/Tier/TierzuchtTierhaltung/empfehlungen-kompetenznetzwerk-nutztierhaltung.pdf;jsessionid=8CC73A220AA1E3C8D82166EA771AECB9.2_cid385?__blob=publicationFile (available only in German)

⁴ http://pure.iiasa.ac.at/id/eprint/14810/1/2017-09-06_TEXTE_80-2017_Synthesis-report.pdf

automatically lead to an improvement in the food situation. It could, however, lead to a reduction in land usage competition and stimulate land reforms which also afford smallholders better access to land. These smallholders additionally need better support in order to be able to sustainably produce a greater amount of healthy food for the local and regional markets.

This is the aim of many of the activities of the “ONEWORLD – No Hunger” initiative of Germany’s Federal Ministry for Economic Cooperation and Development (BMZ). Nonetheless, this initiative should take agri-environmental aspects into account more in order to ensure that the way in which agricultural production in developing countries is increased is socially ethical and eco-friendly, and thus also in line with the 2030 Agenda.

(ii) Good Health and Well-Being (SDG 3)

There is a negative trend in the rate of obesity among adults. No trend can yet be identified among young people. Data collection as part of the European Food and Nutrition Action Plan could be considered for use as an indicator here.

The consumption habits of large parts of the population in Germany currently fall far short of benchmarks for health-promoting nutrition such as those recommended by the German Nutrition Society (DGE). This is the case in particular regarding the consumption of animal products. In the interests of SDG 3, measures should be developed which preferably improve this situation using market economy and pre-competitive instruments. The proposal of the competence network for livestock farming of introducing a levy on these products can serve as a good example here. Germany should take the lead here, although in the medium term at least a European solution should be worked towards.

To improve air pollutant emissions, the specifications regarding the emissions of livestock farming facilities would need to be further developed in line with a modified target image of sustainable food systems. The technical possibilities in terms of the storage and spreading of farm-produced fertiliser (NH₃) are far from exhausted and could be expedited by means of facility funding and regulation.

Additionally, staple foods need to be produced regionally (see SDG 12 and the upcoming RNE recommendation regarding supply chain legislation).

(iii) Clean Water and Sanitation (SDG 6)

The indicator for phosphorus in flowing waters likewise suggests a negative trend. As the majority of the phosphate that makes its way into surface water comes from farming sources and ends up there due to erosion events, there needs to be a massive increase in erosion protection measures, revegetation and funded buffer strips. We also propose that this indicator be allocated to SDG 14.

Similarly, there is a negative trend in terms of nitrate in groundwater. The figure is closely correlated with the nitrogen balance surplus as an indicator and could be replaced by this. The balance surplus

responds more quickly to changes in fertiliser management than the nitrate levels at groundwater monitoring points.

In the interests of a globally connected food system, the virtual water consumption of agrarian imports should also be taken into account. It takes two and a half trillion litres of water per annum merely to produce the soya beans imported to Germany from Brazil and Argentina for the purposes of feedstuff production. The land footprint indicator as proposed for SDG 2 is closely correlated with water consumption. The impacts of the importing of virtual water to Germany from regions with high malnourishment rates and suffering from incipient to pronounced water stress need to be analysed and critically questioned. In 2014, Germany signed up to the Principles for Responsible Investment in Agriculture and Food Systems of the Food and Agriculture Organization (FAO), thereby obliging German companies and companies which operate in Germany to promote access to clean drinking water (Principle 1), respect access to water (Principle 5) and conserve water resources (Principle 6). Germany must therefore enshrine the companies' human rights due diligence obligations in law and make them legally enforceable for internationally affected groups of people too. These obligations should be enforced within companies on the basis of, for example, supply chain legislation.

Fossil water resources should generally only be used for food systems as an exception, an example being traditional agricultural systems in countries with low levels of precipitation.

(iv) Decent Work and Economic Growth (SDG 8)

The indicator for total raw material productivity suggests a positive trend. However, the RNE points out that we can only remain within the planetary boundaries if an absolute reduction in resource consumption is achieved. Raw material productivity increased by 56.4% in Germany between 1994 and 2015. The aim of the German Resource Efficiency Programme (ProgRess) is to double raw material productivity by 2020 in comparison to 1994. If we take its development over the past five years as the basis for the trend, this target will be widely missed. Increased efficiency additionally calls for further expansion of consistency measures such as systematic cycle management and cascade utilisation. An expanded deposit system would be prudent here. Every type of packaging needs to be part of a deposit system – this would drastically reduce glass and plastics consumption. Additionally, imported fruit and vegetables should be delivered in reusable crates. A European solution should be worked towards here, such as the Euro pallet. But even this is not enough, as global primary material usage has more than doubled in the past 30 years. This indicates that raw material productivity alone is unable to have the steering effect necessary for resource conservation. What's needed are verifiable target values for a reduction in absolute raw material consumption, significantly higher efficiency increase rates in order to achieve these ("efficiency revolution") and also a sufficiency policy in all areas of need (housing, nutrition, mobility, communications, etc.).

The RNE therefore proposes that an absolute reduction target be set for resource consumption and that an indicator of resource consumption (in tonnes) per capita/annum be attached to this. This would enable Germany to assume a pioneering position in this central debate.

(v) Responsible Consumption and Production (SDG 12)

It is highly likely that the targets covered by the indicators 12.1.b “Energy consumption and CO₂ emissions from consumption” and 12.2 “EMAS eco-management” will be missed based on the current measures. The RNE therefore proposes that true cost accounting be developed for application with regard to imports as well. This must take a form which allows businesses to be excluded subject to certain conditions in order that it be socially and environmentally fair. The criteria could include business size and the application of certain environmental procedures. The certification of carbon capture likewise entails problems for small businesses in particular as it is costly and not economical. This is a problem which is familiar internationally too in the areas of fair trade and organic farming. Small businesses would benefit more from a clear legal framework than from a system for which they must pay. This would prevent small-scale and microproducers from being forced out of the market by these costs. The FAO’s Committee on World Food Security (CFS) could work on guidelines for true cost accounting.

Certification systems for sustainable agricultural production do exist, such as Ökolandbau, Regionalwert AG and the DLG Sustainability Standard in Germany. The challenge lies in incorporating these into the market economy system, for example by making CAP payments contingent upon sustainability indicators.

The RNE proposes that three new indicators be developed to boost circular regional economies, reduce transport volumes and energy consumption levels, and increase regional processing and value creation:

- (1) **Indicator for food waste and loss:** Food waste and food loss are serious problems, both in Germany and around the world. According to the FAO, approximately a third of all food produced globally ends up as food loss. The 2030 Agenda proposes that food waste be significantly reduced at the retail level and at the consumer level within food consumption both at home and outside of the home. In addition to technical and digital innovations being promoted (packaging, AI refrigerators, apps), clear economic incentives (e.g. a waste tax) are needed in order to reduce food waste. The grading system and the retail sector’s quality requirements should be reviewed to determine whether they are a major cause of food waste. The indicator could quantify how much less food was wasted in comparison to a reference period, thus serving as a valid data pool for the national strategy for the avoidance and reduction of food waste and food loss. Germany’s Federal Ministry of Food and Agriculture (BMEL) is taking action with a variety of measures that serve as the basis for this national strategy, such as its “Too good for the bin!” initiative. The BMEL has spent the past few years looking very closely at the development of an indicator and could provide the details for such an indicator. See also [the RNE’s recommendation regarding the Common Agricultural Policy](#) (CAP; German only) from December 2017.
- (2) **Indicator for food transport and processing:** As we are considering food systems here, we must also take into account transport, packaging and access to food. An indicator would need to record the transport intensity of food supplies – the length of the supply chains, the emission intensity of the means of food transport and the emissions of the sometimes superfluous packaging and processing.

When assessing the carbon footprint of food, the entire supply chain has to be taken into account. Trade agreements should not deny other countries the ability to provide their populations with sufficient healthy food.

- (3) **Indicator for accessibility of sustainably produced foods:** The relevant data here concerns physical accessibility and food pricing. The measures implemented here could include a proactive marketing policy and reduced VAT rates.

(vi) Climate Action (SDG 13)

The RNE calls on the Federal Government to advocate including the food sector in emissions trading at the European level in order to set an example for international pricing, in particular regarding the energy consumption related to transport and production. This could involve an indicator being introduced which tracks changes in carbon capture within agricultural and forestry production systems, thus making it possible to promote climate-positive management outside of emissions trading as well.

(vii) Life Below Water (SDG 14)

The German Sustainable Development Strategy's indicators for nutrient inputs into coastal waters and marine waters show that the related targets are highly unlikely to be met. Concrete measures to improve the indicators could include incentives for turning agricultural land into moorland areas in grassland, generally for preserving existing grassland, and for creating riparian strips and erosion protection measures on cleared agricultural land. Reference is also made here to the nitrogen input measures under (i) of SDG 2.

Generally speaking, international and national debate regarding the ten targets of SDG 14 means there is the chance that marine policy will be given greater consideration in terms of its broadness and its importance to the environment and development. However, the global indicators currently being proposed involve the risk of the potential of SDG 14 being limited in key areas. While the two indicators "Nutrient inputs in coastal waters and marine waters" and "Share of sustainably fished fish populations in the North Sea and Baltic" make sense, they only concern the national level. What's lacking is an indicator that covers the international dimension of SDG 14 more thoroughly and which touches upon the huge significance of fishing for the food security of large population groups in the Global South, in particular in terms of protein supplies.

In many developing countries, the promotion of small-scale fishing is crucial to combating hunger as this generates jobs and income and also provides fish for nourishment. But Germany is contributing to the overfishing of oceans too with its excessive fish consumption and by using fishmeal as a feedstuff in animal production, thereby exacerbating the hunger problem in the countries and among the population groups that are heavily reliant on fish as a source of protein.

The RNE proposes that German production of and imports of fish and seafood from aquaculture and fish farming involving supplementary feeding with fishmeal and fish oil made from wild fish be reduced by

70%. This would also involve a reduction in imports of fishmeal and fish oil as raw products used as feedstuffs for animal fattening. An indicator should be developed which shows the proportion of wild fish used in feeding produced or imported fish and which converts the raw products fish oil and fishmeal into fishmeal equivalents to make them comparable (much like conversions into milk equivalents).

The proposal of an indicator of fishmeal equivalent imports should support the achievement of target 14.7 (*By 2030, increase the economic benefits to small island developing states and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism*) and target 14.b (*Provide access for small-scale artisanal fishers to marine resources and markets*).

The RNE is also calling for marine reserves to be promoted in order to counteract Germany's footprint and also the global footprint currently being created by deep-sea mining.

The SDG targets 14.7 (*Promote sustainable fishing in the poorest countries and small island states*) and 14.b.1 (*Progress by countries in the degree of application of a legal/regulatory/policy/institutional framework which recognizes and protects access rights for small-scale fisheries*) allow Germany to define its own measurable indicators that quantify Germany's contribution to the achievement of the aforementioned targets 14.7 and 14.b in the form of political and financial support for partner states.

(viii) Life on Land (SDG 15)

It is highly likely that the target for indicator 15.1 "Species diversity" and 15.2 "the eutrophication of ecosystems" will not be achieved. The RNE therefore proposes that there be financial instruments for greater species protection within the CAP reform, thus strengthening the agri-environment-climate measures (AECMs), as well as a minimum budget for the Pillar 1 eco-schemes. The RNE is in favour of Germany advocating the improved realisation of Natura 2000 at the European level in the upcoming 2020 CAP negotiations. At the same time, the existing incentive bonuses should be complemented with management plans to accelerate realisation.

Another measure could be the promotion of biotope networks.

The RNE is also calling for the development of a soil fertility indicator. Soil is a resource which is non-renewable and finite. Its long-term functionality therefore needs to be safeguarded. Soils perform a variety of ecosystem services. In addition to production, they have filtering, buffering and regulation functions. An indicator needs to be developed which monitors soil quality with its array of functions, thereby building a bridge to the achievement of SDG 2, SDG 12 and SDG 13.

The monitoring of changes in soil quality should be based on the land usage and the type of soil. Data collection by means of remote sensing (satellites) would be suitable here as soon as this can deliver valid results for the soil indicator. This would make it possible to achieve very up-to-date and land parcel-specific tracking of changes in land usage. This could then be used to draw conclusions regarding changes in the soil functions, such as productivity, water absorption capacity and climate function, and therefore

also regarding the soil quality. With its statements concerning the carbon content of soils, the Agricultural Soil Inventory (BZE-LW) can serve as a supplementary source of data for the soil indicator.