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SDG 2 (Zero Hunger) in the Context of the German Sustainable Development Strategy: Are We Leaving the Starving Behind?

Summary

The Sustainable Development Goals (SDGs) adopted within the framework of the United Nations' 2030 Agenda are universal and apply to all countries, whereby each country is free to establish its own priorities. In order to address the concern that support for the problems of poverty endemic in developing countries could be curtailed in the process, industrial nations including Germany pledged to link national challenges with international objectives, particularly those relating to poor developing countries – in accordance with the Agenda's principle *Leaving no one behind*.

We analysed the revised version of the "German Sustainable Development Strategy," (GSDS), adopted on 11 January 2017, which outlines measures designed to implement the 2030 Agenda, with regard to a primary concern of the developing countries, namely goal number 2: ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture.

Specifically, we analysed the indicators, i.e. the strategy's measurable substance. However, the indicators cited in the GSDS fail to incorporate the developing countries' immediate needs. Measures implemented at national level are aimed chiefly at improving ecological sustainability within the context of German agriculture. Here, particular reference is made to two verifiable indicators relating to the propagation of organic farming and the reduction of the nitrogen surplus in the agricultural sector.

These objectives are doubtless desirable for Germany, and may make a meaningful contribution towards the achievement of other SDGs (e.g. water, biodiversity, health). However, they hardly contribute to the essence of SDG 2. On the contrary, no account is taken of the possible consequences of these two indicators for food security efforts in developing countries, and, with this, their coherence in terms of development policy. Said consequences could include agricultural extensification and a tendency towards increased food prices. Other policy areas which (could) exercise a considerable influence on global food security, such as bioenergy and agricultural trade, are also overlooked.

Although important and necessary measures are described for the international context, which Germany must implement in order to achieve SDG 2, verifiable indicators and commitments that these efforts will be continued in future are lacking.

All things considered, the German Sustainable Development Strategy has so far failed to meet the requirements of the 2030 Agenda as regards SDG 2. Which changes are necessary for the further development of the GSDS, planned for 2018?

- In a national context, an indicator ensuring the (examination of and endeavours to achieve) development coherence in the field of national policy measures surrounding SDG 2 is required.
- As far as the international context is concerned, a credible safeguarding of the current engagements in the field of development cooperation (DC), or a voluntary commitment to increasing the German contribution even after the end of the special initiative "ONE WORLD – No Hunger", is essential.
- Indicators concerning the sustainability of German agriculture as a whole, the consumption of agricultural products, specifically animal products, and genetic diversity would be particularly expedient in this regard.

The German Sustainable Development Strategy and SDG 2

On 11 January 2017, the Federal Government adopted a revised version of the "German Sustainable Development Strategy" (*Deutsche Nachhaltigkeitsstrategie*, GSDS). The GSDS constitutes the framework for the national implementation of the 2030 Agenda, and defines objectives and indicators for each of the 17 Sustainable Development Goals (SDGs) which represent the current status of sustainable development and form the basis for the strategy's management. In the process, explicit mention is made of "measures implemented *via* Germany with a global impact", this "in addition to measures having an effect *in* Germany." These are complemented by the support of other countries in the form of bilateral cooperation (measures *with* Germany).

The present commentary aims to analyse and evaluate the political priorities and indicators defined in the GSDS for the SDG 2 (abbreviated German designation: Zero Hunger). We are particularly interested in statements relating to developing countries, which should (actually) be paramount in the context of this particular SDG. We examine the manner in which the international goal and its sub-goals are reflected in the GSDS (intra-SDG 2 coherence). We will be devoting particular attention to the indicators, i.e. the strategy's measurable substance. In addition, we consider the interdependencies between SDG 2 and the other SDGs.

Global goals and indicators

SDG 2 has five sub-goals relating to nutrition and agriculture (see box on left). With this, SDG 2 addresses two central challenges which are closely related, but not congruent.

Firstly, wide disparities in the global nutrition system exist. The FAO (2015) estimates that, today, around 800 million people are suffering from hunger, and a further two billion are malnourished. Simultaneously, two billion people are overweight or even obese, predominantly in industrial nations, but also, increasingly, in developing countries. Depending on various estimates, production increases of 70 – 110 per cent are required by 2050 in order to feed the global population, which is ever-increasing, particularly in Africa, and growing more and more affluent (Mauser et al., 2015). The requisite intensification of food production depends on a host of different factors. Adjustments in consumer habits in both industrial nations and developing countries (e.g. consumption of animal products, overconsumption of food, food losses and food waste), as well as the impact of climate change, play a major role. Although improvements in the consumption sector are important, they can, on the basis of realistic assumptions, only partially counterbalance the additional requirement. Production increases would only be redundant in the event of radical changes in consumer habits, such as widespread vegetarianism on a global scale.

Agricultural production is also crucial as regards poverty (SDG 1) and other SDGs related to the multidimensionality of poverty, such as health and education. Agriculture is an essential source of income for small farmers, the majority of the poor, while low food prices are vital to consumers. Secondly, agriculture is instrumental in the loss of and damage to a host of natural resources and ecosystems. Agriculture is duty-bound to conserve the resources it uses more effectively, if only for the long-term preservation of its own means of production. Furthermore, it is important to take account of a conflict of objectives between food systems on the one hand, and Clean Water and Sanitation (SDG 6), Life on Land (SDG 15), Life below Water (SDG 14), and Climate Action (SDG 13), for instance, on the other.

National goals and indicators

The GSDS only does partial justice to this complex framework of objectives. Although the global level is addressed in great detail as part of the political priorities and planned measures, as far as those indicators decisive for accountability are concerned, Germany has decided to limit itself to defining indicators for goal 2.4, deemed particularly significant in terms of national ecological and health development. The indicators demonstrate a path dependency, and were already in use prior to the GSDS' alignment to the SDGs. They quantify a) the annual nitrogen surplus for the agricultural sector, and b) the proportion of organic farming on the overall area of land

Box: Global and national sub-goals and indicators of SDG 2

Global sub-goals and indicators	National sub-goals and indicators
2.1 End hunger (Indicators: availability and accessibility of food)	**Environmentally sound production in our cultivated landscapes** – Overall nitrogen surpluses for Germany to be reduced to 70 kilograms per hectare of utilised agricultural land in the annual average from 2028–2032 – Share of organic farming on land used for agriculture to be increased to 20% in coming years
2.2 End all forms of malnourishment (Indicators: chronic and acute malnutrition)	
2.3 Double productivity and income of small food producers (Indicators: production volume per work unit; average income of small food producers)	
2.4 Guarantee the sustainability of food production systems (Indicator: proportion of agricultural land cultivated productively and sustainably)	
2.5 Preserve genetic diversity (Indicators: number of secured vegetable and animal genetic resources; proportion of local breeds deemed endangered/not endangered)	

Sources: UN (2017), Federal Government (2016)

used for agriculture (see box on right). As a result, the chief focus is placed on ecological goals: reducing nitrate levels in groundwater and the nitrogen surplus in bodies of water, decreasing the nitrogen oxide emissions which have so much impact as a greenhouse gas, and improving ecological diversity.

The Federal Government deems the promotion of a healthy, balanced diet a further priority for the SDG 2 at national level. An indicator also exists for this goal, namely the obesity ratio for adults and adolescents, which is, however, quantified as part of SDG 3 (Good Health and Well-Being).

Evaluation of the indicators

The GSDS sub-goals for SDG 2 address important areas of concern. However, the GSDS indicators are insufficient, one-sided and bypass the essence of the goal, namely to end hunger. We view the indicators critically for three reasons.

Firstly, it may be the case that, as a result of said indicators, the precise opposite of what is at the heart of SDG 2, the fight against hunger, is achieved. This is because both a reduction in nitrogen fertilisers and the spread of organic farming could lead to a decline in production. Both of the above constitute extensification strategies in Germany, which may lead to an excess demand for agricultural products, resulting in international increases in agricultural prices. This could have a negative impact on poor consumers, particularly in the event that the agricultural prices are already high (as is the case at present).

Secondly, we do not believe that the indicators are sufficient to achieve sustainable agriculture. In industrial nations, the core problems facing modern agriculture are multifactorial and based on several (secondary) effects (nitrate and phosphate surpluses, pesticide residues, species-poor farm- and grasslands, soil degradation, cleared landscapes). It follows that the replacement of smaller adjustments with the improved regulation and implementation of sustainability rules across the agricultural sector as a whole would be far more effective. This could be achieved by tightening the so-called cross-compliance requirements for good agricultural practice, for example. This would also correspond more closely to the global SDG indicator entitled "proportion of agricultural land cultivated productively and sustainably". However, organic farming can be promoted as the engine of sustainable agriculture nonetheless.

Thirdly, the additional effects of the national indicators defined for SDG 2 prove modest even as far as the ecological sustainability of German agriculture is concerned. This is because the objectives pursued in this context are already addressed as part of other GSDS goals:

- The nutrient inputs from the agricultural sector are addressed as part of indicators in the SDGs 6 (Clean Water and Sanitation), 13 (Climate Action), 14 (Life below Water) and 15 (Life on Land).
- The promotion of organic farming is also relevant to SDG 12 (Responsible Consumption and Production), where it is included in the indicator entitled "market share of products with national eco-labels".

As a result, the selected indicators only solve problems in Germany and are limited to SDG 2.4 and to other ecological SDGs (however, only to a minimal and redundant extent). They are not expedient as far as the essence of SDG 2 is concerned, and may even prove detrimental to the same.

Need for other, or further indicators

Other, or further indicators are necessary in order to tackle the diverse challenges posed by SDG 2 adequately. It would, for instance, be advisable to employ an indicator which tracks Germany's land footprint. The land footprint calculates the land area per capita required to produce the goods and services consumed, on average, by each individual. With this, it records the global effects of consumption and also those of national extensification strategies. In the event that the footprint exceeds the global area of available land per capita, consumption is not regarded as sustainable. In Europe, the land footprint per capita is approx. 40 per cent above global per-capita availability (Weinzettel et al., 2013). As the consumption of animal products of all types has a particular influence on the land footprint – a staggering 80 per cent of all agricultural land in Germany is currently being monopolised for the production of animal foodstuffs – an indicator quantifying the per-capita consumption of animal proteins could be envisaged as an alternative. Not only would this expose the negative consequences of the intensive, arable farming-based husbandry for both the environment and for food security in developing countries, but would also contribute to a reduction in malnutrition in Germany.

Moreover, indicators for sub-goal 2.5 (preserving genetic diversity) are lacking, which is crucial to the long-term preservation of the foundations of breeding progress in an agricultural context. As the diversity of species and varieties is best conserved *in situ* (under cultivation), the indicators formulated at global level (see box) should also be quantified at national level.

In order to underline Germany's international responsibility, the Federal Government would also be advised to specify measurable indicators which quantify the country's direct contribution to the achievement of the sub-goals in developing countries. This is, first and foremost, the task of DC. To date, the GSDS lacks a corresponding vision in this respect. The rubric "measures with Germany" reports almost exclusively on the current activities of the BMZ (Federal Ministry for Economic Cooperation and Development) within the special initiative "ONE WORLD – No Hunger" (SEWOH), which has contributed to Germany's improved standing in this area. However, it is not yet clear whether the SEWOH initiative will be continued in the long term, and, as a result, whether the DC funds for agriculture, rural development and food security will be consolidated at current levels or even increased.

In order to gauge Germany's contribution to SDG 2 via DC, we recommend the creation of a proxy indicator at input

level, such as "funding increases in the field of food and nutrition security and agriculture". An input as opposed to an outcome indicator is recommended because quantifying the effects of measures by a donor at global level is a complex undertaking. Similar input indicators are included in other areas, such as SDG 13 (climate protection-related payments made primarily to developing and emerging countries). An indicator would have the additional benefit that other contributions by Germany within the context of multilateral initiatives, to date diffuse and thus frequently criticised, would become measurable. These include the commitment at the G7 to liberate 500 million people from hunger and malnutrition.

Policy coherence and an inter-ministerial strategy for food security

Germany is involved in policies in diverse ways at both national and European level, which (may) have a strong impact on SDG 2. These include agricultural policy, (bio-) energy policy, bio-economy, trade policy, climate policy and health and economic policy (in terms of standards and regulations, for instance). However, the precise effects of these policies on SDG 2 are both complex and situation-dependent. On the one hand, via agricultural prices, rural and agricultural labour markets, they have an impact on the income and purchasing power of agricultural producers and consumers and on the many hundreds of million rural/agricultural households. On the other hand, indirect effects related to the demand for land, intensification strategies and displacement effects are possible. It follows that very complex relations ensue on a case-by-case basis; at this juncture, it is merely important to note that possible conflicts within SDG 2, between SDGs and between national and global level in the GSDS have not yet been discussed, or only to an inadequate extent. It would also be advisable to take greater account of interdependencies within DC than has been the case to date. Hunger and malnutrition could be addressed more effectively via the more nutrition-sensitive organisation of social security systems (SDG 1) and labour-intensive growth (SDG 8) for the poorest citizens (SDG 1).

In view of the host of potentially relevant national and European policies for SDG 2 and the complex, partially situation-dependent causal relations described above, it would be preferable to avoid overly abridged and simplistic goals and indicators in the interests of policy coherence. As a result and in the absence of a clear outcome indicator, an activities indicator such as the systematic ex ante and concomitant coherence impact screening of such policies would be a better alternative in the case of SDG 2. To this end, it would be advisable to extend the obligation to perform a sustainability audit in the case of draft laws and ordinances, in existence since 2009, to international level, at least in the case of plausible presumed effects. An inter-ministerial strategy for food and nutrition security issued by the ministries BMZ (Federal Ministry for Economic Cooperation and Development), BMEL (Federal Ministry for Food and Agriculture), AA (Federal Foreign Office), BMUB (Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety), BMBF (Federal Ministry of Education and Research), BMG (Federal Ministry of Health) and BMWi (Federal Ministry for Economic Affairs and Energy) could also contribute to greater policy coherence. Following the example of the USA's *Feed the Future* initiative, a *Whole-of-Government* initiative could be established in order to coordinate the DC-related activities and programmes within the various ministries and thus achieve maximum coherence.

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