Sustainable Finance Platform

SDG 2 Impact Measurement Overview

By the Sustainable Finance Platform

The Sustainable Finance Platform

This report is a reflection of the deliberations of the SDG Impact Assessment Working Group set up under the auspices of the Sustainable Finance Platform. The working group consists of financial and non-financial companies and is sponsored by PGGM.

The Sustainable Finance Platform is a cooperative venture of De Nederlandsche Bank (chair), the Dutch Banking Association, the Dutch Association of Insurers, the Federation of the Dutch Pension Funds, the Dutch Fund and Asset Management Association, Invest-NL, the Netherlands Authority for the Financial Markets, the Ministry of Finance, the Ministry of Economic Affairs and Climate, and the Sustainable Finance Lab. Platform members meet twice a year to forge cross-sectoral links, to find ways to prevent or overcome obstacles to sustainable funding and to encourage sustainability by working together on specific topics.

The Sustainable Finance Platform fully supports this paper. However, the practices and advice described herein are in no way binding for the individual financial institutions comprising the industry organizations which are members of the Platform, nor are they committed to take any specific follow-up actions. Furthermore, this paper outlines private sector initiatives and as such does not contain any supervisory requirements.

Content

1 Introduction

This Impact Measurement Overview on Sustainable Development Goal (SDG) 2 – Zero Hunger – is part of a series of papers that describe the methodologies, data sources and market practices that are currently available for each SDG. The paper follows up on the publication SDG impact indicators – A guide for investors and companies (2017) by the SDG Impact Assessment Working Group ('Working Group') of the Sustainable Finance Platform. Its aim is to provide the investor community with a summary of available methodologies, data sources and examples of impact measurement for SDG 2. The SDG 2 Impact Measurement Overview can be found on the website of the DNB Sustainable Finance Platform for use by the wider investor community, as a **dynamic document** that will be improved upon and refined with progressing insights, experiences and data quality.

SDG 2 aims to "end hunger, achieve food security and improved nutrition and promote sustainable agriculture."[1] Yet, the world is not on track to achieve Zero Hunger by 2030. Indeed, "after decades of steady decline, the number of people who suffer from hunger – as measured by the prevalence of undernourishment – began to slowly increase again in 2015."[2] It is estimated that, at current, nearly 690 million people are suffering from hunger (i.e. 8.9% of the global population).[3] If trends continue, the number of people affected by hunger could surpass 840 million by 2030.[4] On top of this, the economic and logistical consequences of the COVID-19 pandemic will likely increase "the depth and breadth of hunger (…) worldwide."[5]

Concerted efforts are needed for addressing present and future challenges related to the global food and agriculture system, to increase the agricultural productivity and sustainable food production, crucial to help alleviate the perils of hunger.[6]

Positive impact indicators and the logic model

The positive impact indicators the Working Group originally proposed for SDG 2 in the aforementioned Guide for Investors were:

- Number of people provided with safe, nutritious and sufficient food (Target 2.1)
- Ecologically sustainable production per hectare (Target 2.4)
- % avoided harvest, transport, storage losses (Target 12.3)7
- % products with certified improvements in nutritional value (Target 2.2)

[1] See https://sdgs.un.org/2030agenda
[2] See https://www.un.org/sustainabledevelopment/hunger/
[3] See Ibid.
[4] See Ibid.
[5] See https://docs.wfp.org/api/documents/WFP-0000114205/download/?_ga=2.241337546.952775517.1586900153-341597442.1584735263
[6] See https://www.un.org/sustainabledevelopment/wp-content/uploads/2016/08/2_Why-It-Matters-2020.pdf
[7] This indicator, modelled after SDG Target 12.3 was included here due to its clear relevance for SDG 2 impact measurement.

These and other indicators can be mapped on the logic model below:

• Equity and/or credit	• Companies developing, producing and distributing products and services, in the areas of: [8] ○ Production of basic food, healthy food ingredients, healthy and natural foods ○ Sustainable and low-carbon agriculture, farmland ○ Fertilizer, crop protection materials, seeds	• Tonnes of sustainably produced food • % of products certified for organic or regenerative farming practices	• % of products with certified improvements in nutritional value • % of avoided harvest, transport, storage loss	• Number of people provided with safe, nutritious and sufficient food[9]

The focus of this SDG 2 Impact Measurement Overview on positive impact measurement does not preclude the need to identify and measure **adverse impacts**. After all, solely accounting for positive impact, and disregarding potential adverse impacts, may facilitate 'SDG washing'. Moreover, companies that contribute positively to SDG 2 (e.g. by providing save and nutritious food) may nonetheless have adverse impacts on other, interlinked SDGs (e.g. through adverse environmental impact),[10] or even on SDG 2 itself.

[8] Taxonomies can be used to identify appropriate companies, based on their activities.
[9] See https://iris.thegiin.org/metric/5.2/PI2575/
[10] For example, increased use of fertilizer, although resulting in higher yield, may have detrimental effects on the environment, such as soil depletion or run-off and leaching of nutrients.

2 Methodologies and initiatives

Several SDG 2-specific methodologies and initiatives are available for evaluating the impact of companies and investments on 'Zero Hunger'. Some relevant methodologies and initiatives are included in the table below and mapped to the logic model.

• APG-PGGM taxonomy • Relevant certifications: e.g. Fair Trade, USDA Organic, Organic Soil Association, Rainforest Alliance, Roundtable on Sustainable Palm Oil, Roundtable on Responsible Soy, GFSI	• Sustainable agriculture; FAO methodology • Harvest and post-harvest losses; FAO guidelines on the measurement • The FLW Protocol	• PGGM/UBS/Wageningen revenue-to-number of people supplied with dietary needs model

Among the methodologies and initiatives that approximate impact measurement by classifying companies' activities and revenues, we identify the taxonomy developed by APG and PGGM and various certifications.

The **taxonomy developed by APG and PGGM** offers guidance on which companies contribute to the advancement of SDG 2, by mapping their revenues to pre-defined SDG 2 solutions. Moreover, **certifications** can be used to identify whether a company's activities and products are in line with relevant guidelines on, for example, sustainable and/or safe food production.

Among the methodologies and initiatives that approximate impact measurement by evaluating or quantifying outputs and/or outcomes we identify a range of methodologies proposed by the **Food and Agricultural Organization (FAO)** of the United Nations. We specifically emphasize their methodologies that focus on sustainable agricultural production, as well as for estimating post-harvest losses. In this context, another relevant methodology is the **Food Loss and Waste Accounting and Reporting Standard** ('FLW Standard'), developed by the Food Loss and Waste Protocol to enable "companies, countries, cities and others to quantify and report on food loss and waste."[11]

Among the methodologies and initiatives that measure impact by contextualizing outputs/outcomes, we identify the model developed by PGGM/UBS/Wageningen. The **PGGM/UBS/Wageningen** revenue-to-number of people supplied with dietary needs model assesses the impact of agricultural technology suppliers on food security. It focuses on technologies that have the potential to improve food availability, one of the four elements of food security, by increasing crop yield. The model makes it theoretically possible to calculate *conversion factors* that convert company revenue into additional food production, which can be converted to the additional number of people being supplied with their daily diet.

[11] See https://flwprotocol.org/

3 Data sources

In the table below, we include the most relevant available data sources to support the above-mentioned methodologies and map them to the logic model

• Company reports • FactSet Revere	• The Access to Seeds Index • Trase	• Peer-reviewed scientific publications • The Global Food Security Index • FAO's SDG Progress Report • Goal 2: Zero Hunger - SDG Tracker • FAOSTAT • The Food Loss and Waste Database

Information about companies' revenues and activities can be retrieved directly from **company reports**[12] or from more general data sources, such as FactSet.

Available data sources to obtain (or calculate) output and outcome data, include the Access to Seeds Index and Trase.

The Access to Seeds Index measures and compares the efforts of the world's leading seed companies to enhance the productivity of smallholder farmers. The 2019 Access to Seeds Index is one of the first Sustainable Development Goals benchmarks published by the World Benchmarking Alliance.

Trase is a platform which provides data on agricultural supply chains of key commodities for various countries and regions, as well as on some exporter groups.[13] Through the mapping of publicly available data, Trase seeks to increase supply chain transparency and reveal "the links to environmental and social risks in tropical forest regions."[14]

Lastly, country-level and worldwide data on food and agriculture, useful for contextualizing companies' outputs and outcomes and moving toward impact measurement, is available from **peer-reviewed scientific publications**, as well as a number of publicly available sources.

The Global Food Security Index considers the core issues of food affordability, availability, and quality across a set of 113 countries. The index is a dynamic quantitative and qualitative benchmarking model, constructed from 34 unique indicators, that measures these drivers of food security across both developing and developed countries.

[12] Company reports may also be used to retrieve output, outcome and even impact data.
[13] See https://trase.earth/profiles
[14] See https://trase.earth/about

FAOSTAT provides access to food and agriculture data for over 245 countries and territories and covers all FAO regional groupings from 1961 to the most recent year available. More specific information on SDG-related indicators can be retrieved from the **SDG Progress Report from FAO**, which tracks progress on food and agriculture-related SDG indicators.

Our World in Data's SDG Tracker is a free, open-access resource where users can track and explore global and country-level progress towards each of the 17 Sustainable Development Goals through interactive data visualizations. On the page dedicated to SDG 2, they report data on, amongst other, prevalence of undernourishment, prevalence of food insecurity and economic value added per agricultural worker.

The Food Loss and Waste Database is the largest online collection of data on both food loss and food waste and their causes reported throughout the literature. The database contains data and information from openly accessible reports and studies measuring food loss.

4.1 Company examples

Several companies are already reporting on their activities, outputs, outcomes and even impacts relative to SDG 2.[15] Below, we briefly discuss the example of DSM and list other relevant examples (see second table below).

• About $65m has been invested by AIF in Rwanda in best-in-class technology, operational since December 2016.	• AIF provides a scalable and sustainable solution to malnutrition via **local production** of **highly nutritious foods** in Rwanda and the East African region	• **The Nootri range**, a set of porridge flours made for the whole family. • **WFP Super Cereal Plus**, a Fortified Blended Food (FBF) of partially pre-cooked and milled cereals, fortified with micronutrients (vitamins and minerals) • **45,000MT** of high quality fortified blended foods per year produced in the local factory. • **100%** of products fortified.	• 1.6m malnourished children reached through the UN World Food Program (South Sudan, Northern Uganda, Rwanda and Kenya) • 3.5m nutritious meals/yr provided to children in Rwanda hospital.

With strong experience in the field of maternal and early life nutrition, DSM aims to fortify diets of mothers during pregnancy and breast feeding as well as the nutrition of the baby during pregnancy, infancy and early childhood.

Africa Improved Foods (AIF), one of the initiatives that DSM is involved in, is a manufacturer and supplier of high-quality and nutrient-rich complementary foods to combat malnutrition for children and pregnant and breastfeeding women in Rwanda and the East African region. It reaches over 1.6 million consumers daily. An example of fortified foods produced by AIF is "Nootri" a set of porridge flours made for the whole family. The flours have been enriched with the relevant vitamins, minerals and proteins required for healthy growth.

These products are produced from locally grown mixed grains of soy, maize, whole wheat, millet and sorghum; also aiming to improve livelihoods of local farmers (US$17m regionally sourced at > 40,000 local farmers). Indeed, together with provision of nutritious food, economic development is one of the core objectives of AIF. In this area, the initiative has contributed to the creation of >300 jobs at facility in Kigali, of which 40% female, as well as the addition of 2% to Rwanda's manufacturing sector's contribution to GDP. AIF is now aiming to expand in Ethiopia, Kenya, Nigeria, Zambia and their dream is to go across the African continent and set up partnerships in all countries.

Other company examples include:

• Bonduelle	• Ahold Delhaize • Danone • Nestlé	

[15] Not all companies make explicit references to the SDG framework in their reports, but nonetheless include information about food production and provision.

4.2 Investor examples

Several investors are already reporting on their (financed) activities, outputs, outcomes and even impacts relative to SDG 2.[16] Below, the example of Triodos Bank and Investment Management[17] is briefly discussed and other relevant investor examples are listed (see second table below).

• **Equity and/or credit**	• Loans and investments are dominantly focused on organic farming, distribution and food processing[18]	• **Hectares of organic farmland financed across Europe** ≈ 32,000	• **Meals produced** ≈ 33,000,000 (equivalent)	• **Number of people in Europe provided with safe, nutritious and sufficient food** = 30,000[19]

Triodos Bank N.V. is a sustainable bank that aims to "make money work for positive, social, environmental and cultural change."[20] Their investment strategy is based on a 'positive screening' criterion, meaning that the organizations, companies and people that the bank invests in must be assessed to have a positive environmental and/or social impact. In the context of food and agriculture, they "specialise in financing sustainable food production through (…) lending and investing activity in organic farming and sustainable trade."[21]

Other investor examples include:

• Munich Venture Partners • ADM Capital Cibus Fund • Aberdeen Global Equity Impact Fund	• Agriculture Capital • Westchester (Nuveen) • responsAbility • Equilibrium • CFC	

[16] Not all investors make explicit references to the SDG framework in their reports, but nonetheless include information about (financed) food production and provision.
[17] All information presented in the table was retrieved from https://www.annual-report-triodos.com/2020/ unless specified otherwise.
[18] See Triodos Bank's *Towards ecologically and socially resilient food and agriculture systems* (2019)
[19] See https://www.annual-report-triodos.com/2020/disclosures/appendix-iii-un-sustainable-development-goals
[20] See https://www.triodos.com/about-us
[21] See https://www.annual-report-triodos.com/2020/disclosures/appendix-iii-un-sustainable-development-goals

5 Challenges and future developments

Although SDG 2 impact measurement is making advances, it is not yet prioritized in reporting. Indeed, whilst many companies and investors claim to have an impact on SDG 2, this impact is often not reported on a clear set of metrics. Moreover, outputs and outcomes are rarely broken down to specific geographies or social segments, despite the availability of a large body of macro data.

Overall, impact measurement in the context of SDG 2 still faces various (methodological) challenges, including:

- **Ease of impact measurement**: the application of some of the methodologies illustrated above requires a considerable amount of time and expertise, and not all information needed for the calculations may be publicly available. The lack of publicly available information on key variables makes it so that, as of now, linking the revenue of any company selling a specific product to impact indicators through so-called conversion factors is not yet feasible. Convergence of reporting metrics and methodologies, including for impact, may help simplify impact measurement calculations.
- **Affordability and accessibility**: SDG Target 3.1, after which one of the proposed positive impact indicators is modelled, makes explicit that food should be **accessible** for "all people, in particular the poor and people in vulnerable situations."[22] In this context it is important to note that food and nutrition security is a multidimensional issue. Food availability is one dimension of it, but the food and nutrition status of an individual or household is also determined by access to food, for which income is the main driver. At current, however, it remains challenging to define commonly agreed upon indicators, supported by existing methodologies and data sources, that adequately capture the affordability and accessibility dimensions of impact, and more work in this direction is required. Nonetheless, with progressing insights and data quality, it might eventually be possible to assess the impact of companies based on whether the products and services they provide are affordable and accessible.
- **Geographic and demographic specificity of impacts**: SDG 2 impact measurement should aim to account for context and location. For example, in developing countries, where the differences between farming systems can be large (e.g. small subsistence farmers versus large commercial farmers), adoption of agricultural technologies by large farmers is unlikely to contribute to national food security apart from trickle down effects (e.g. increase in wages and employment, lower food prices), while adoption by small farmers,[23] and in general underserved populations is expected to have much more impact.[24] These effects cannot be quantified without detailed information on the buyers of the products. With improving data quality, impact measurement may be further refined.

[22] See https://sdgs.un.org/2030agenda (emphasis added)
[23] SDG Target 2.3, "By 2030, double the agricultural productivity and incomes of small-scale food producers," emphasizes the need to focus on these, more vulnerable members of the food system. See https://sdgs.un.org/2030agenda
[24] See https://www.wur.nl/en/testimonial/Enhancing-food-security-via-better-investment-decisions.htm


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