

Policy Paper Food Security

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1 Introduction

PGGM is a not-for-profit cooperative pension fund service provider. We offer our clients pension management, asset management and management advice. Our primary task is to provide our clients and their beneficiaries with the best possible pension product. Hence, we first and foremost strive for an optimal risk-adjusted return on our investments. We and our clients believe that a good pension is worth more in a liveable world. That is why investing in a sustainable manner is important to us. We are convinced that integrating Environmental, Social and Governance (ESG) issues leads to improved financial performance in the long run. We believe that financial and social return go hand in hand.

The 1996 World Food Summit defined food security as follows: "Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life".¹ Access to adequate food is a basic human right. Even though the proportion of undernourished people has declined significantly in the past decades,² we still face many challenges when it comes achieving food security. There is still widespread malnutrition in the form of hunger, obesity and micronutrient deficiency across the globe. We face a growing food demand due to population growth and shifting diets. By 2050, the world must feed almost ten billion people. Globally there is unequal food availability across regions, within countries, and even within households. Insufficient food security could therefore lead to conflicts. Simultaneously, food losses and waste are still common both in developed and developing countries. At the same time, poverty is still prevalent among a large number of people working in the agricultural sector. Finally, agriculture can have a significant environmental impact. The challenges we are facing are to achieve food security for a growing world population, while at the same time transforming food systems so that they contribute to social and economic development while being environmentally sustainable.

This paper serves three purposes:

1. **Being transparent** to our external stakeholders about PGGM's view on environmental, social and governance (ESG) issues related to food security.
2. **Communicating our views** to companies we invest in, with regard to ESG issues related to food security.
3. **Providing guidance** for our investment teams for integrating ESG issues related to food security in investment decisions.

This paper should not be seen as an isolated policy document. It must be seen in combination with PGGM's Responsible Investment (RI) Guidelines. This paper only describes PGGM's views on food security. The RI guidelines describe how PGGM uses its instruments for responsible investment with regard to food security and other focus areas.

This paper will proceed as follows. We will first explain why PGGM is working on food security as being a key area of focus. This is substantiated by key insights into the magnitude of issues associated with food security, to further underline the importance of the issue.

Subsequently we discuss the way in which we look at the subject matter of food security, taking different angles into account. We will conclude by discussing how to address the issue in the investment portfolio and how activities to mitigate the concerns can be employed.

1 See FAO: <http://www.fao.org/sustainable-development-goals/overview/fao-and-the-post-2015-development-agenda/food-security-and-the-right-to-food/en/>

2 The prevalence of undernourishment has declined from 14.7% in 2000 to 11.0% in 2016, see FAO (2017): <http://www.fao.org/state-of-food-security-nutrition>

Box. Our position on food security

- Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.
- Despite the decline in the number of undernourished people in the past decades, there is still widespread malnutrition in the form of hunger, obesity and micronutrient deficiency across the globe. In the last few years, undernourishment has been on the rise again.
- Failing to achieve food security has significant adverse impacts on the world and can be a material risk to many of our investments.
- Agricultural production is interlinked with a range of environmental issues, such as GHG emissions, freshwater use, soil and water pollution, deforestation and biodiversity loss.
- To achieve food security in the long run, we have to transform food systems so that they contribute to social and economic development while being environmentally sustainable.

2 The Importance of Food Security

There are several reasons for PGGM to work towards guidance on issues relating to food security. In this paragraph we will discuss the key reasons to pursue improvement. First of all, failing to achieve food security has significant adverse impacts on the world and can be a material risk to many of our investments. A severe food crisis is one of the top-10 risks to the world as identified by the World Economic Forum (WEF)³. According to their 2018 report the world is exposed to severe risk due to the fact that three quarters of the food production is concentrated on only twelve different types of plants and five animal species. Furthermore, crop harvests are dependent on relatively few countries (e.g. corn is mostly dependent on China and the US). If one of these crop harvests becomes prone to disease and/or failing, this is likely to cause widespread famine.

This is exacerbated by the fact that productivity is skewed. Agricultural productivity (yield per hectare) has increased dramatically in the developed world, Asia and Latin America in the past decades, but hardly increased in Sub-Saharan Africa (see Figure 1), where the yield per hectare is less than one-third than in developed countries.

Agriculture causes a range of interlinked environmental issues. It is responsible for 24% of global GHG emissions, around 70% of freshwater use and around 70% of deforestation worldwide, which in turn accelerates biodiversity loss⁴. 11% of the globe's terrestrial surface is used for crop production. Besides this, sources of food are at risk of becoming poisoned through pollution of food sources, on land as well as in the oceans, from excess nutrients, pesticides and other pollutants.

3 See WEF (2018): http://www3.weforum.org/docs/WEF_GRR18_Report.pdf. The WEF defines a food crisis as: "inadequate, unaffordable, or unreliable access to appropriate quantities and quality of food and nutrition on a major scale".

4 See WRI (2013): <https://www.wri.org/blog/2013/12/global-food-challenge-explained-18-graphics>

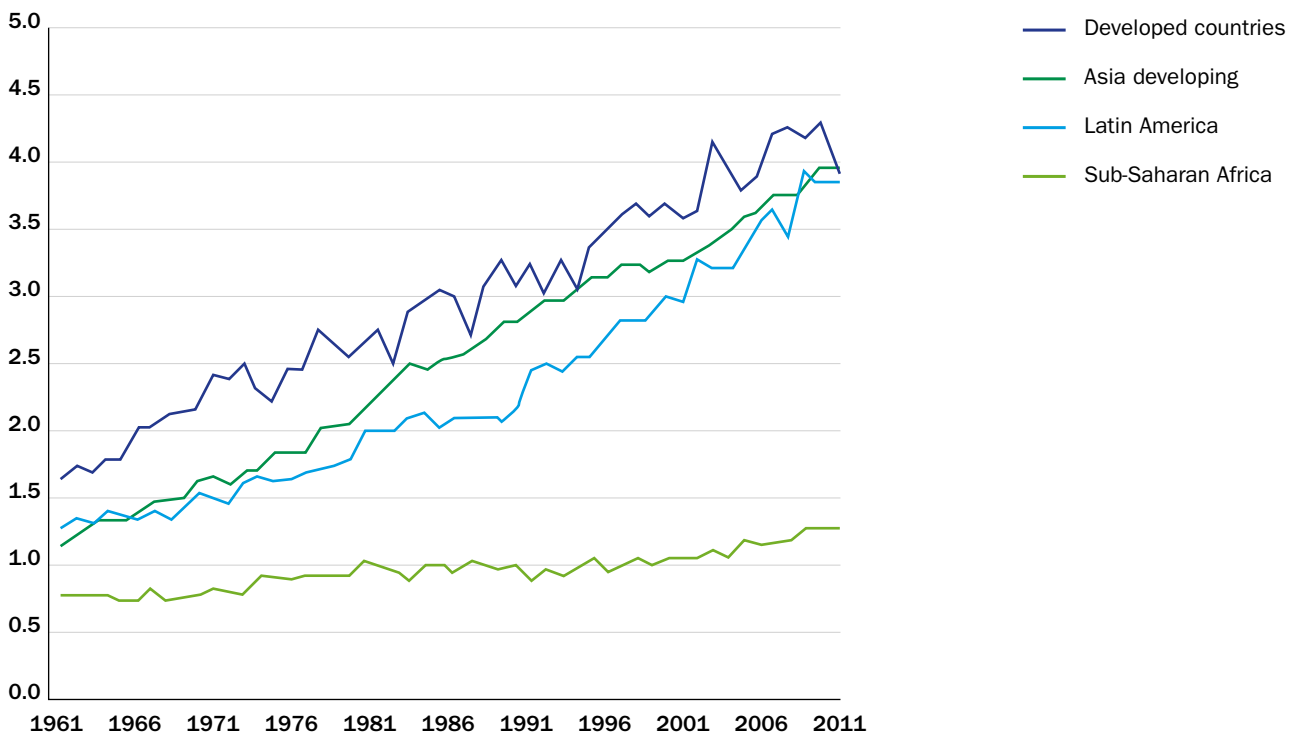


Figure 1: Yields in in metric tons per hectare

At the same time, 1.3 billion tons of food, roughly one-third of the global production, is lost or wasted⁵. Developing countries suffer more food losses during agricultural production, while in middle- and high-income regions, food waste at the retail and consumer level tends to be higher. The direct economic consequences of food wastage are about \$750 billion annually.

Taking this into consideration, it is no surprise that food security is part of the global agenda for sustainable development. To “end hunger, achieve food security and improved nutrition and promote sustainable agriculture” is the second Sustainable Development Goal (SDG) from the United Nations (UN)⁶. To back this up with numbers, Figure 2 presents the development of undernourishment according to the FAO. The graph both provides percentage and absolute numbers for the period between 2005 and 2016, with an estimate for 2017. The Figure shows that in 2016, 10.8% of the global population was undernourished. This translates into 804.2 million people,

which is about the size of the entire European population. Despite the decline in the past decade (from 14.5% in 2005), undernourishment is on the rise again and was expected to affect 10.9% of the population in 2017, taking the aforementioned number up to 820.8 million people. As the global population is growing, the absolute number of undernourished people is expected to rise even stronger⁷. The current world population of 7.6 billion is expected to reach 8.6 billion in 2030 and 9.8 billion in 2050.⁸ Taking into account a growing population and shifting diets (if not redirected), the global demand for food calories is expected to increase by 69 percent in 2050 compared to 2006.⁹

Another element is malnutrition. Malnutrition includes not only undernourishment, but also over nourishment (obesity) and micronutrient deficiencies. In 2016, an estimated 1.9 billion adults are overweight. Of these people, over 650 million were obese. The worldwide prevalence of obesity nearly tripled between 1975 and

5 Food loss is defined as “the decrease in quantity or quality of food”. Food waste is part of food loss and refers to discarding or alternative (non-food) use of food that is safe and nutritious for human consumption along the entire food supply chain, from primary production to end household consumer level (FAO, 2014).
6 See UN: <https://sustainabledevelopment.un.org/sdg2>

7 See FAO: <http://www.fao.org/sustainable-development-goals/overview/fao-and-the-post-2015-development-agenda/food-security-and-the-right-to-food/en/>
8 See UN (2017): <https://www.un.org/development/desa/en/news/population/world-population-prospects-2017.html>
9 See WRI (2013): <https://www.wri.org/blog/2013/12/global-food-challenge-explained-18-graphics>

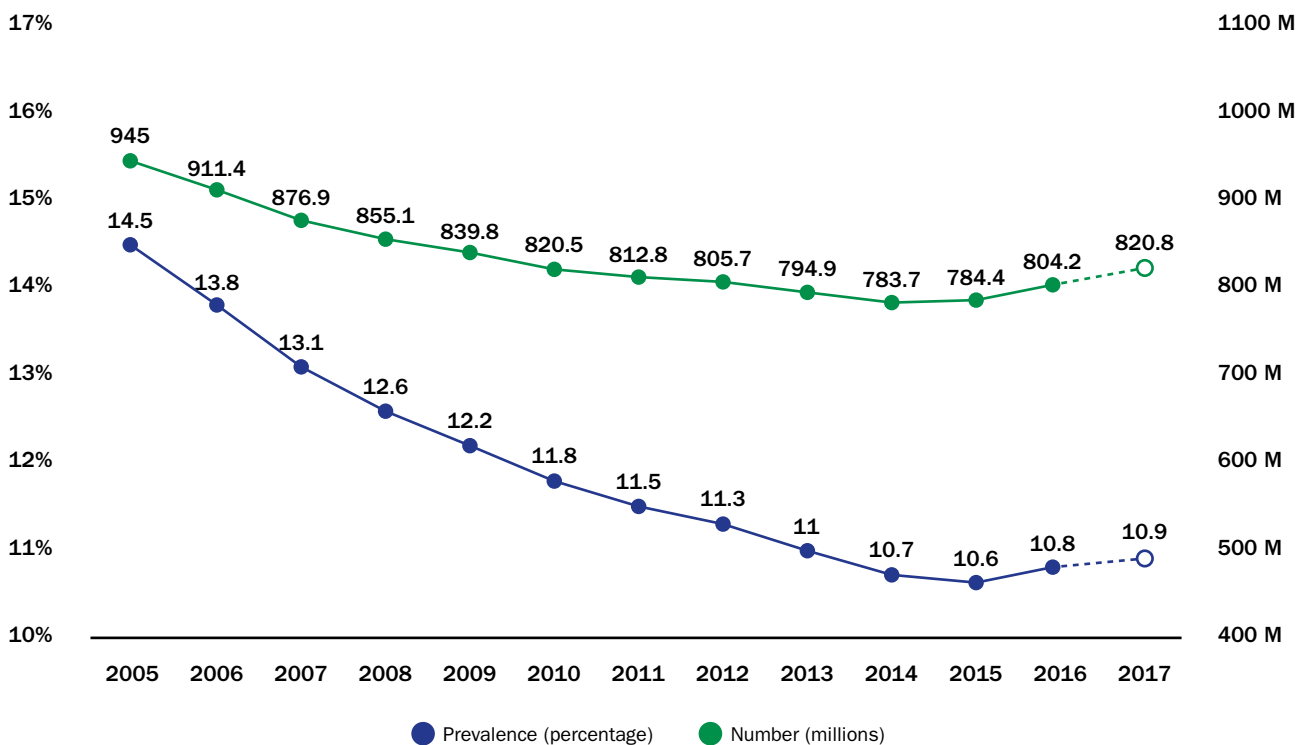


Figure 2: Prevalence of Undernourishment (PoU) and number of people undernourished according to FAO
Figures in percentages of global population (LHS) and number of people (RHS), 2005-2017E

2016.¹⁰ At the same time over 2 billion people are estimated to suffer from micronutrient deficiencies¹¹, a lack of essential vitamins and minerals required in small amounts by the body for proper growth and development. Unlike energy-protein undernourishment, the health impacts of micronutrient deficiency are not always acutely visible; it is therefore sometimes termed 'hidden hunger'. The severe health risks associated with micronutrient deficiency, such as poor physical and mental development, are mostly affecting children and pregnant women in (relatively) lower income countries in Africa and Asia.

Our largest client PFZW has identified food security as one of its areas of focus in their Investment Policy 2020¹². Food security also clearly links to several other focus areas of PFZW: climate change and pollution, water scarcity, healthcare and safeguarding human rights. In many cases, several issues converge in investee companies.

10 See WHO (2018): <http://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>

11 See WHO (2018): <http://www.who.int/news-room/fact-sheets/detail/malnutrition>

12 See PFZW (2014): https://www.pfzw.nl/Documents/Over-ons/PFZW_Beleggingsbeleid_2020.pdf

3 Food security defined by PGGM

As explained in the introduction, PGGM uses the definition of food security as agreed on at the 1996 World Food Summit: *“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”*¹³.

This definition includes four components:

- **Availability:** physical availability of food addresses the “supply side” of food security and refers to facilitating sufficient food production
- **Utilization:** ensuring that the produced food is sufficient for a healthy and nutritious diet
- **Access:** enabling both the physical and economic access to foods that meet recommended dietary standards as well as any individual food preferences. It can refer to both physical and economic access to food
- **Stability:** it is not a distinctive dimension of food security but rather refers to the stability of the three above mentioned pillars over time

Both stability availability of food production on the long term require sustainable food production. This means that food security has to be improved, without severe negative impacts on society and environment. There is guidance on this to further explain what it encompasses. We support the five principles of sustainable food and agriculture developed by the FAO¹⁴:

1. Improving efficiency in the use of resources is crucial to sustainable agriculture
2. Sustainability requires direct action to conserve, protect and enhance natural resources
3. Agriculture that fails to protect and improve rural livelihoods, equity and social well-being is unsustainable
4. Enhanced resilience of people, communities and ecosystems is key to sustainable agriculture
5. Sustainable food and agriculture requires responsible and effective governance mechanisms

As mentioned before, ESG issues related to food security often relate to other focus areas of PGGM as well. This position paper therefore does not elaborate on the effects of food production on climate change, water scarcity, obesity, human rights & labor rights and governance issues, as these issues are covered by the Climate Change & Pollution, Water Scarcity, Healthcare, Human Rights and Corporate Governance focus areas respectively.

¹³ See FAO: <http://www.fao.org/sustainable-development-goals/overview/fao-and-the-post-2015-development-agenda/food-security-and-the-right-to-food/en/>

¹⁴ See FAO: <http://www.fao.org/sustainability/en/>

4 Framework to assess food security in investment portfolio

The table below shows how PGGM integrates ESG issues related to food security in its investment portfolio. The table looks at the issue of food security through three different (but partially overlapping) perspectives. We first look at materiality, i.e. the way in which the issue influences (expected) risk and return. Secondly we consider impact, which is the way in which the portfolio impacts the world in terms of societal and environmental influence. Impact can both detract (in case of negative impact) or contribute (in case of positive impact). The table also provides the relevant standards we chose as a framework to assess key issues and risks. Whilst other standards may exist, we feel these standards best enable us to address and prioritize issues. Furthermore, we see these standards increasingly finding their way into legislation and regulation¹⁵.

We use the standards mentioned above to assess ESG issues related to food security and prioritize our activities in this field.

4.1 Integrating food security as financially material ESG issue in investment decisions

Using a GICS classification to identify investee companies focused on sectors that are directly related to food¹⁶ our financial exposure to the sector is estimated to be € 6.9 billion (3.2%) of the total portfolio as per June 30th, 2018. The exposure includes some 360 companies, which translates into an average investment per company of around € 23 million. However, the true exposure to the issues is poised to be larger, as large conglomerates that are classified under other sectors can be linked to food as well. However these companies are not included in the numbers as these are not pure play food companies.

¹⁵ e.g. the OECD guidelines are to be translated into regulation and reporting requirements.

¹⁶ Based in GICS level 4 classification: Agriculture & Farm Machinery; Agricultural Products; Brewers; Distillers & Vintners; Fertilizers & Agricultural Chemicals; Food & Staples Retailing; Food Distributors; Food Retail; Food, Beverage & Tobacco; Hyper Markets & Super Centers; Packaged Foods & Meats; Restaurants; Retailing; Soft Drinks; Trading Companies & Distributors.

Objectives and Standards	
Objectives	Relevant standards
Integrating food security as financially material ESG issue in investment decisions	■ Sustainability Accounting Standards Board (SASB) materiality map*
Reducing negative social and environmental impacts related to food security	■ OECD guidelines for multinational enterprises** ■ UN Guiding Principles on Business and Human Rights (UNGPs)***
Increasing positive social and environmental impacts related to food security	■ UN Sustainable Development Goals (SDGs)****

Table 1. Objectives and Standards

* See SASB (2018): <https://materiality.sasb.org/>

** See OECD (2011): <http://www.oecd.org/investment/mne/>

*** See UN (2011): https://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf

**** See UN: <https://www.un.org/sustainabledevelopment/>

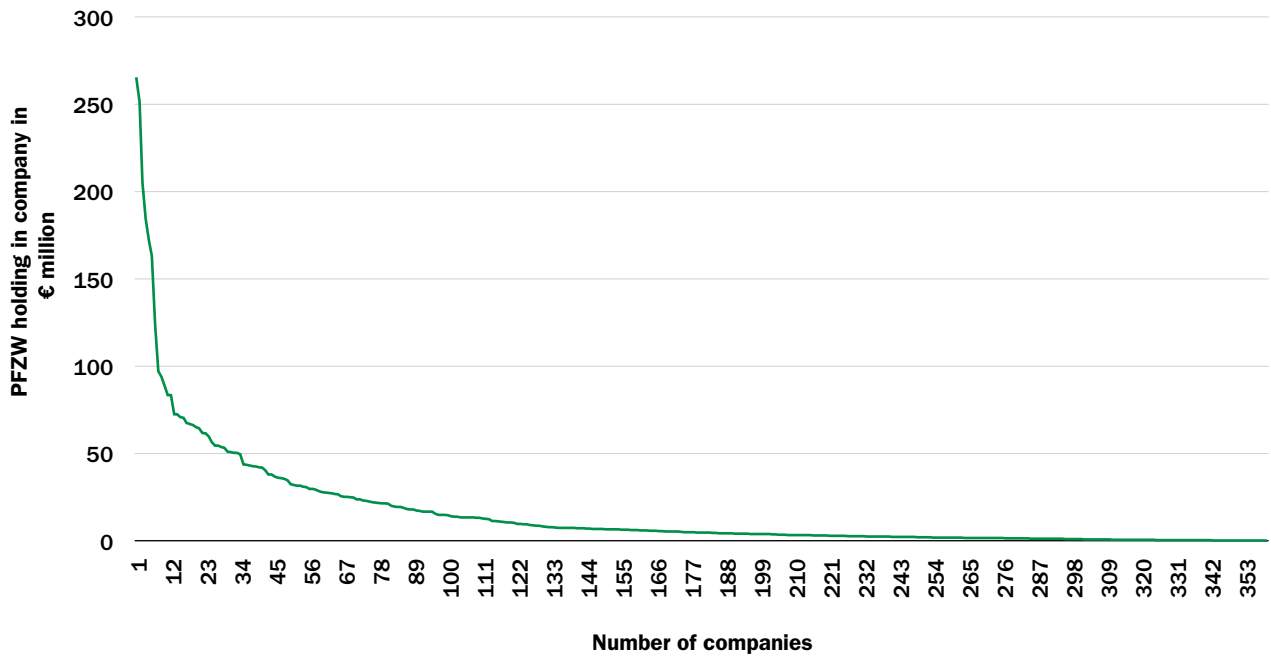


Figure 3: Size distribution of companies related to food security in PFZW portfolio

The above highlights the financial exposure and shows that a limited number of companies have a vital role in furthering the goals of improved food security. From a materiality perspective, the number of investee companies enable us to look at the key risks as highlighted by the SASB materiality map. Agricultural supply chains are complex and lacking in transparency. Consequently they are prone to many ESG issues which are challenging to manage. ESG issues such as greenhouse gas emissions, energy management, water and waste management, biodiversity impacts, and labour practices, are most likely material to companies that produce agricultural products according to SASB. Therefore, we encourage companies in agricultural supply chains that we invest in, to address these issues using relevant industry standards.

4.2 Reducing negative social and environmental impacts related to food security

In its Responsible Investment Guidelines¹⁷, PGGM has committed itself to the OECD guidelines for multinational enterprises¹⁸ and the UN Guiding Principles on Business and Human Rights (UNGPs).¹⁹ We expect companies we

invest in to take these standards into account in their business practices. Regarding adverse impacts related to food security, we see the OECD-FAO Guidance for Responsible Agricultural Supply Chains²⁰ as a relevant guidance that can help investee companies, that operate in agricultural supply chains, implement Responsible Business Conduct ('RBC') in their policies and management systems. Companies should:

- Establish strong management systems for responsible supply chains
- Identify, assess and prioritize risks in the supply chain
- Design and implement a strategy to respond to identified risks
- Verify supply chain due diligence
- Report on supply chain due diligence
- Establish operational-level grievance mechanisms and have processes in place to enable remediation

For agricultural supply chains specifically, we consider human rights, labour rights, health and safety, natural resources and environmental protection to be important RBC topics. Human rights and health and safety are already covered by other focus areas of PGGM. Under our focus area of food security, we focus specifically on natural resources and environmental protection.

17 See PG (2014): https://www.pggm.nl/media/f4zoxray/responsible-investment-implementation-framework_may-2014_pggm.pdf

18 See OECD (2011): <http://www.oecd.org/daf/inv/mne/48004323.pdf>

19 See UN (2011): https://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf

20 See OECD/FAO (2016): <http://mneguidelines.oecd.org/OECD-FAO-Guidance.pdf>

Human rights, labour rights, health and safety

Access to adequate food is a human right²¹. PGGM's position regarding human rights, labour rights and health and safety is explained in PGGM's Human Rights Policy.²² This policy is applicable for all of PGGM's investments, including those in companies in agricultural supply chains. We will therefore not capture this topic specifically for food security as a stand-alone issue.

Natural resources, Fisheries and Forestry

Companies should respect legitimate tenure right holders and their rights over natural resources such as land, fisheries, forests and water, by upholding the principle of Free, Prior, and Informed Consent (FPIC). They should ensure the sustainable use of natural resources and increase the efficiency of resource use and energy efficiency. Soil fertility should be maintained or improved and soil erosion should be avoided. Companies should try to reduce food loss and waste and promote recycling. Companies should support and conserve biodiversity, genetic resources and ecosystem services, respect protected areas, high conservation value areas and endangered species, control and minimize the spread of non-native species.

Nature and environmental protection

Negative impacts on air, land, soil, water, forests and biodiversity should, to the extent possible, be prevented, minimized and remedied. The generation of hazardous and non-hazardous waste should be avoided or reduced, toxic substances substituted or reduced, the productive use or ensuring a safe disposal of waste should be enhanced.

4.3 Increasing positive social and environmental impacts related to food security

The UN have included the achievement of food security and sustainable agriculture in their second SDG for 2030, for which more investments in the agricultural sector are needed.²³ PGGM, has committed to quadruple its Investments in Solutions²⁴ portfolio, of which food security (which relates to SDG2) is one of the four focus areas, from €5 billion in 2014 to €20 billion in 2020. This is why PGGM does not only seek to reduce financial risks and adverse impacts related to food production, but

also increasingly seeks for financial opportunities and positive impact related to food security.

We believe a shift towards more healthy and sustainable diets²⁵, for example the shift from animal-based proteins to plant-based proteins²⁶, could promote both security and health, while at the same time reducing negative impacts of food production and offering attractive investment opportunities.

We believe that there is not necessarily a trade-off between investments that have a positive societal impact and a market rate risk-return. We actively seek for investment opportunities that contribute to food security and at the same generate a competitive risk adjusted return. This contribution must be measurable. There are various metrics for measuring food security. The two most frequently used are the Prevalence of Undernourishment (PoU) indicator²⁷ and the Global Hunger Index.²⁸ These indicators are mainly used to measure food security in specific countries. We have developed several indicators to measure the positive impact of companies we invest in on food security²⁹, such as: annual increase in yield; annual avoided harvest, transport and storage losses; improvement of nutritional value and annual increase in number of people with access to nutritional food.

21 See OHCHR & FAO (2010).

22 See PGGM (2016): https://www.pggm.nl/english/what-we-think/Documents/PGGM-Human-Rights-Policy_2016.pdf

23 See UN: <https://sustainabledevelopment.un.org/sdg2>

24 For more information about Investments in Solutions at PGGM, see our website on Investments in Solutions: <https://www.pggm.nl/english/what-we-do/Pages/Investing-in-solutions.aspx>

25 See for example the report from the EAT-Lancet Commission (2019): Food in the Anthropocene.

26 See WRI (2016).

27 See FAO: <http://www.fao.org/sustainable-development-goals/indicators/211/en/>

28 See IFPRI: <http://www.ifpri.org/publication/global-hunger-index>

29 See PGGM: https://www.pggm.nl/english/what-we-do/Pages/BIO_Impact.aspx

5 Conclusion and further steps

The strive for sustainable food security is one of the most important challenges humanity is currently facing. Investors can play a role in furthering food security by integrating material ESG issues, reducing negative impact and increasing positive impact of their investment portfolios.

ESG issues, such as greenhouse gas emissions, energy management, water and waste management, biodiversity impacts, and labour practices, are financially material for investors. These issues can be screened for within the companies invested in and be translated into a financial risk framework.

In terms of impact, there are important challenges. Negative impact is mainly found in the areas of human rights, land rights, labour rights, health and safety, natural resources and environmental protection. Biodiversity is at risk through pollution and the use of chemicals that are potentially harmful. Screening on these issues with companies that are part of the supply chain is key to avoidance of negative impact.

Positive impact can be achieved through the improvement both of quality and quantity of crop yield and by supporting a shift towards healthy and sustainable diets. This can be furthered through technical innovation as well as through development of programs to support and enhance production, particularly in sub-Saharan Africa. This is befitting a Dutch institutional investor, as the Netherlands is one of the largest agricultural production countries.

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