



Food and Agriculture
Organization of the
United Nations

AgrInvest-Food Systems Project

**Guidelines for sustainable
agricultural investments
for Burkina Faso, Ethiopia,
Kenya and Niger**

A close-up photograph of a person's hand, likely of African descent, holding a small amount of dark coffee beans. The hand is positioned in the lower right quadrant of the cover, with the palm facing up. The background is a solid dark blue color.

ecdpm

Guidelines for sustainable agricultural investments for Burkina Faso, Ethiopia, Kenya and Niger

Author:
Armando Cortez Tellez

Required citation:

Cortez Tellez, A. 2022. *Guidelines for sustainable agricultural investments for Burkina Faso, Ethiopia, Kenya and Niger* – AgrInvest-Food Systems Project. Rome, FAO. <https://doi.org/10.4060/cc0451en>

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISBN 978-92-5-136357-7

© FAO, 2022



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode>).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: “This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original [Language] edition shall be the authoritative edition.”

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization <http://www.wipo.int/amc/en/mediation/rules> and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

Cover photograph:

©FAO/Giulio Napolitano

CONTENTS

Acknowledgements	v
Abbreviations and acronyms	vi
Preface	vii
A. General remarks and principles	1
B. The five main steps to strengthen and incorporate Sustainable Development Goals (SDGs) impacts in the investment process	3
B.1 Raising awareness and developing an organization culture for SDG-impact investments	3
B.2 Identifying the potential and current SDG-related impacts	3
B.3 Assessing the SDG-related impacts	5
B.4 Managing the SDG-related impacts	9
B.5 Disclosing the SDG-related impacts	11
C. Implementation of the guide in specific value chains	13
D. Concluding remarks and next steps	27
E. Bibliography	29
F. Annexes	33

Figures

Figure 1: Type of impacts grouped by economic, societal and environmental effects	5
Figure 2: Assessment of untargeted investments	6
Figure 3: Assessment of targeted investments	7
Figure 4: Assessing resilience	9
Figure 5: Assessing disclosure by type of audience	11

Acknowledgements

This scoping guide was prepared by Armando Cortez Tellez, Agribusiness Finance Specialist Consultant to the Food and Agriculture Organization of the United Nations (FAO). The authors benefited from the insights of a number of experts based in Burkina Faso, Ethiopia, Kenya and Niger. The authors also received valuable feedback and contributions on earlier drafts from Margherita Bavagnoli and Massimo Pera (both FAO Rome) and Francesco Rampa, Koen Dekeyser, Paulina Bizzotto Molina, Cecilia D'Alessandro, Fabien Tondel, Poorva Karkare, Jeske van Seters and Amanda Bisong (ECDPM).

Abbreviations and acronyms

AFOLU	Agriculture, forestry and other land use
AgrInvest-FS	AgrInvest-Food Systems Project
AIV	African indigenous vegetables
CSR	Corporate social responsibility
GHG	Greenhouse gas
IDEA	Indicateurs de Durabilité des Exploitations Agricoles
IRRI	International Rice Research Institute
MSMEs	Micro-, small and medium-sized enterprises
NHID	Natural hazard-induced disasters
PG	Public goods
RISE	The response-inducing sustainability evaluation
SAFA	The sustainability assessment of food and agriculture systems
SDG	Sustainable Development Goals
SRI	System of Rice Intensification
SRP	Sustainable Rice Platform assurance scheme
UG	United Green
UNEP	United Nations Environment Programme
UNERIZ	Union Nationale des Étuveuses de Riz du Burkina Faso
VC	Value chain

Preface

These guidelines have been drawn up as part of the AgrInvest-Food Systems Project (AgrInvest-FS), a collaboration between the Food and Agriculture Organization of the United Nations (FAO) and the European Centre for Development Policy Management (ECDPM) to promote private investments in African food systems that contribute to sustainable development objectives. With the financial support of the Government of Italy, the project is being implemented in Burkina Faso, Ethiopia, Kenya and Niger.

The purpose of these guidelines is to serve as a reference and provide practical country-customized guidance to foster sustainable investments in agrifood systems in the four African countries covered by the AgrInvest-FS project of FAO-ECDPM.¹ The guidelines were elaborated with information gathered through political, economic and value chain (VC) analyses undertaken in these countries,² as well as referencing and building on similar investment guidelines to find synergies and leverage from previous works. Furthermore, insights were also drawn from real cases of investment proposals. In this guide, when referring to investment proposals, we are referring to investments in agrifood systems.

These guidelines, although they may be useful for a wide audience, have been mainly designed for VC actors, both public and private, that are directly investing or planning to sustainably invest in agrifood systems in these countries. Indirect investors, on the other hand, only hold investment instruments from investees and do not necessarily engage with them (e.g. some asset managers), whereas direct investors originate the funding transaction and also actively engage with the investees on topics related to the investment design and others. These direct investors are the main providers of short-term funding for agriculture.³ This was also witnessed in Kenya by the AgrInvest-FS project, where micro-, small and medium-sized enterprises (MSMEs) and farmers' organizations working in African indigenous vegetables (AIVs) were the ones more willing to expand their own investments in the VC and therefore have meaningful operational control of the investments.

This guide puts special emphasis on meaningful operational control because it allows investors to actively define the characteristics of the agro-investment and subsequently its impacts, whilst investors without operational control might only have an advisory role or a power of veto on the investment process. Thus, from a stakeholder perspective, the guide is aimed at producers, aggregators, processors, wholesalers, retailers, service providers (e.g. health services, input providers and technical assistance providers). Similarly, from a project cycle standpoint, the guidelines can also be applied while designing an investment proposal or during its implementation.

From a content point of view, the guide can also be applied to corporate social responsibility (CSR) programmes that contribute and are related to the operations of the investee(s) as well as to VC projects undertaken by foundations or similar organizations. Finally, although this guide may be useful, as well as for some direct investors such as financial institution providers, it is strongly suggested that it would complement any existing guidelines for these kinds of investors.⁴

¹This document uses UNEP's (2016) definition of sustainable investment which incorporates societal, economic, governance and environmental impacts.

²The political economy analysis of the food system in [Burkina Faso, Ethiopia, Kenya](#) and [Niger](#), and the VC assessment of [dairy in Ethiopia, onion in Niger, rice in Burkina Faso, cage aquaculture in Kenya](#) and [indigenous vegetables in Kenya](#).

³GSMA (2021).

⁴For indirect investors such as asset managers, see [Operating Principles for Impact Management](#) and [UNEP - Principles for Responsible Investment](#). Regarding financial institutions, see [UNEP FI - Principles for Responsible Banking](#).

A. General remarks and cross cutting principles

These guidelines are recommendations to make more informed and sustainable investment decisions in agrifood systems and do not pretend to be prescriptive as the specific circumstances of each investor and location of the investment do matter. In fact, investments in agrifood systems are not made in a vacuum and can be affected – positively and negatively – by public policies or dynamics from other sectors. For instance, the size of the investment, its scope, the regulations in place or the capabilities of the investor are factors that influence the investment’s impact (positively or negatively). Against this background, investors can either follow sequentially the proposed 5-steps or go directly into the step that they find most suitable to their needs. However, it is recommended that in the medium- and long-term, investors develop clear strategies, policies and processes that incorporate the main components of the 5-steps. This will allow them to pursue investment strategies that integrate environmental and social objectives that not only mitigate exposure to **risks** but also expand opportunities to generate positive financial, environmental and social **returns**, even in contexts where investment decisions are made with inadequate information (ITF, 2021).

Increasing sustainability of agrifood systems-related investments is a dynamic process as the further the investment progresses – both during the design or implementation stage – the chances are that more information about the impact will become available, allowing investors to better address their impacts. Thus, similar to business decisions that must be taken to ensure the continuity of a business, impact-related decisions should also be taken when the investor seeks to pursue positive SDG-related impacts through the investment whilst minimizing negative impacts. Finally, these guidelines should be interpreted and applied consistently with existing obligations under national and international law.

B. Proposed steps to incorporate and/or strengthen SDGs impact in the investment process

B.1. Raise awareness and develop an organization culture for SDG-impact investments

Raising awareness within investment organizations (e.g. among project designers and implementers of investments) and also externally (with investment partners) about the importance of the SDGs and possible trade-offs is of paramount importance to foster sustainable agrifood systems transformation. By acknowledging and understanding the importance of the SDGs, not only as a risk management practice but also as a potential source of multiple benefits,⁵ the likelihood of investors adopting and promoting –during both the design and the implementation phase – more sustainable investment decisions increases.⁶

Unlike previous practice that assigns solely the responsibility of raising awareness about investment impact to a specific person/unit within an organization, this is a transversal responsibility that must be promoted by all actors involved in the investment process, ranging from the project designers to potential external investors. One way to know if raising SDG awareness is improving the SDG-alignment culture within an organization is to check how impact-related internal and external grievances are considered in the organization. Another important mechanism that should show an impact-conscious organization is the involvement of shareholders, the board of directors and top managers in impact-related strategies and assessments.⁷

The SDGs cover a wide array of topics and their implementation varies within countries, thus a tool that can inform investors of what the SDGs are as well as their progress in [Burkina Faso](#), [Ethiopia](#), [Kenya](#) and [Niger](#), and is the [Sustainable Development Report](#). Furthermore, FAO's online course "Sustainable food systems" can also help investors to know more about sustainable food systems.

B.2. Identify the potential and current SDG-related impacts

In order to identify the potential and current SDG-related impacts, this guideline distinguishes between *targeted investments* (which focus on the use of the proceeds of investments, like a project) and *untargeted investments* (which focus on the recipient(s) of the funds).⁸ In both cases, considering that the overall business ecosystem and the behaviour of the other VC actors always affect the impact of individual investments, engaging with local multistakeholder efforts for VC development can help investors in the identification of their own potential and current SDG-related impacts.

Investing in investees (untargeted investments)

Selecting investees or partners for a sustainable investment is not simple; that's why some investors use screening criteria, such as the ones shown below:

- **Negative screening criteria.** The investors list activities/sectors/types of companies that they consider are unsustainable. Consequently, potential investees on the list are deemed ineligible. Investors can also set minimum or relative standards (e.g. socioeconomic and/or environmental) that potential investee(s) must comply with.⁹

⁵For instance, there is limited awareness among investors about the benefits of undertaking impact studies (ENTAG & Resiliencia Ethiopia, 2021). Moreover, Mercer (2015) shows that adapting to climate change (within a 2°C scenario) should not negatively affect returns for long-term diversified investors.

⁶For instance, although several companies investing in Africa consider conducting CSR activities is a prerequisite for doing business (ENTAG & Resiliencia Ethiopia, 2021), they also think that impact assessment is a "tick box exercise", which explains why its implementation is generally poor.

⁷For instance, some financial institutions – like Kenya's Cooperative and Equity banks – to work better with smallholder's VCs are setting-up specific strategies and units to address their needs (e.g. through tailored products and repayment schemes). These specific units are also supporting the integration of environmental and social impact objectives within their investment strategies.

⁸The recipients of the funds can be MSME's, cooperatives or others, which can either use the funds to finance one or multiple projects or to refinance their balance sheet.

⁹In specific contexts, acknowledging the difficulties in finding investees that meet the minimum sustainability standards, investors can be more flexible and compare the potential investees with their peers and exclude partners that show poor performance.

- **Positive screening criteria.** The investors list activities/sectors/types of companies that they consider are sustainable. Consequently, potential investees on the list are deemed eligible.¹⁰ Investors can also require of the investee(s) that mandatory factors, such as socioeconomic and environmental practices, policies and procedures, already be in place. In cases where potential investees work in multiple sectors, investors can set rules such as more than X percent (e.g. 75 percent) of its revenues must be generated from “green/sustainable” business lines or activities.¹¹
- **Normative-based screening criteria.** This requires investees to comply with local or international regulations for sustainable investments and/or hold or obtain international certifications that show sustainable practices.¹² For instance, in all four countries, an environmental (and sometimes a societal) Impact Assessment is required by law for some types of agro-investments.¹³ Regarding the required certifications, some of them are linked to the price paid to suppliers and to the kind of suppliers involved ([Fair-Trade](#) and [Small Producers Symbol - SPP](#)),¹⁴ the kind of inputs or how they are used ([Organic](#), [Biodynamic](#) and [Rain Forest](#)), how animals are treated ([Animal Welfare Approved](#)), the sustainability of the soil ([Soil Association](#)), how sustainable specific VCs are ([Forest Stewardship Certification](#), the [MSC Fisheries Certification](#), and the [Sustainable Rice Platform assurance scheme – SRP](#)¹⁵) if certain quality standards are met ([Global GAP](#) and [HACCP](#)) and how they align with climate change standards ([Climate Bonds Standard](#)) among others.¹⁶

The use of the previous screening criteria will largely depend on the specific local circumstances, the type of investor and type of investment, as sometimes it might be better to only apply one of them. For example, for a specific commodity in a specific location, as there might be very few VC actors that comply with international standards, the application of a negative screening criteria might be the sole option.¹⁷ However, it is important to highlight that the use of the entire set of screening tools or criteria does not necessarily imply that the investment is sustainable, per se, but that its use constitutes the first step to assess the sustainability of an investment.¹⁸

Investing in activities (targeted investments)

A targeted investment, and specifically its activities, has multiple impacts in different domains. To identify these impacts, this guide has grouped them into three main groups: economic, societal and environmental, as seen below:¹⁹

¹⁰For instance, in Niger, the local Investment Fund (FISAN) only deems as eligible small VC actors and certain activities (Jenn-Treyer & Hassane, 2019). Moreover, a useful guide to identify activities or sectors that are environmentally sustainable is the [European Union taxonomy](#) and China’s [Green Bond Endorsed Project Catalogue](#).

¹¹For instance, some impact investors such as [Kenya Climate Ventures](#) and The [AgriFI Kenya Challenge Fund](#), explicitly define the type of sectors and investees they target, given their expected sustainability impact, including how they benefit smallholder farmers. Another example is Conservation International Ventures, which provided a \$500 000 credit line to Kenya’s Victory Farms for its commitment to practices that benefit ecosystems and human well-being at the same time (CI Ventures, 2020; Dekeyser & Obiero, 2021).

¹²It is important to point out that investors are not always aware of what is legally required of them, as in Ethiopia (ENTAG & Resiliencia Ethiopia, 2021).

¹³See NCEA for a summary of the process in [Burkina Faso](#), [Ethiopia](#), [Kenya](#) and [Niger](#).

¹⁴E.g. Kenyan agri-enterprises willing to access a special credit line from Equity Bank (under a European Investment Bank on-lending facility linked to the AgriFI Kenya Challenge) must prove that their operations promote the adoption of Good Agricultural Practices (Kenya GAP certification) by the smallholder farmers they partner with.

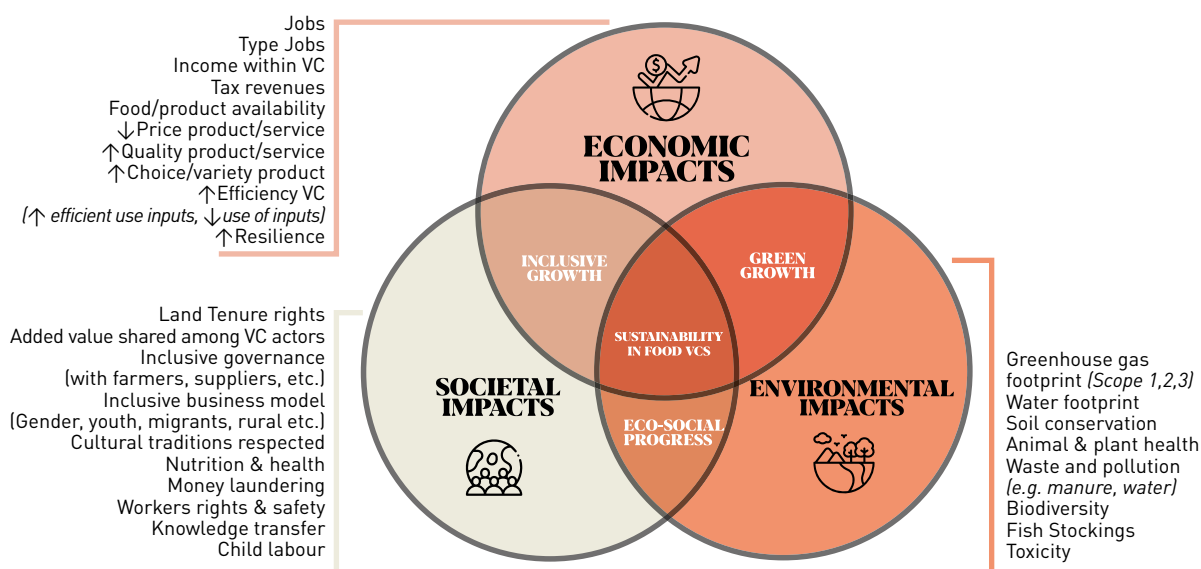
¹⁵Indeed, these kinds of certifications are also used to promote sustainable practices among VC actors. For example, in Burkina Faso, several actors, including the [Belgian NGO Rikolto](#) and the GIZs, have been working to roll out the SRP scheme among smallholder rice producers.

¹⁶This is not an exhaustive list, and this guideline does not recommend one certification over another or its adoption in all cases as they have different practices, goals and situations that allow their implementation or not.

¹⁷For instance, the Global Sustainable Alliance (2018) has found that the largest sustainable investment strategy is negative screening.

¹⁸Besides screening, investors need also to assess, manage and disclose their impacts to reasonably claim that their investments are sustainable.

¹⁹Although most of these indicators can be used for fish VCs, it is highly recommended for specific fish indicators and how they were implemented in real cases, see FAO (Forthcoming).

Figure 1: Type of impacts grouped by economic, societal and environmental effects

Source: Author's own elaboration based on FAO (2014).

This general methodology (Figure 1) can be complemented with other tools, such as: megatrend analysis, SWOT analysis, impacts and dependency mappings and stakeholders' engagements and ESG materiality analysis, to name but a few.²⁰

Investors with already running investments should leverage from their past and current experience for the identification of potential impacts in the new investment.²¹ Similarly, as many investors replicate endeavours from different countries/contexts, previous impact maps can also be used as a reference.

The identification of the impacts will depend on the stage of the investment proposal and who has designed the project. For instance, while designers must ensure that almost all potential impacts have been included in the project documentation, potential external investors must cross-check this information.

B.3. Assess and cross-check the SDG-related impacts

Once the ongoing and potential impacts have been identified, investors need to assess and – if possible – cross-check the analysis undertaken. They can do this work in-house or outsource it.²² This will certainly depend on the complexity of the investment and the context. However, investors must always strive to assess, at least generally, their impacts whilst respecting minimum quality standards.²³ In fact, there is evidence to suggest that currently investors are mis-pricing the environmental risks (UNEP, 2015). Furthermore, even though overestimating the positive impacts might significantly strengthen an investment's rationale, this might be highly counterproductive in the medium and long-term as

²⁰See Annex 2 for more information about these tools.

²¹For example, two Kenyan AIV companies used previous experiences to identify positive impacts and accordingly adapt their investment plans (e.g. improve soil quality through manure as well as by vertically integrating suppliers).

²²In some cases, impacted stakeholders might require independent impact assessments to prove how they were (are) impacted. Strictly speaking, these are part of managing the impact (Step 4). However, the likelihood of this external request can be largely reduced if the identification (Step 2) and assessment (Step 3) are adequately conducted, and the impacts are appropriately managed (Step 4) and communicated (Step 5).

²³For example, impact assessments should comply with the following principles: Relevance (ensure all the relevant information is included); Completeness (account for and incorporate all possible impacts); Consistency (use consistent methodologies to allow meaningful comparisons over time); Transparency (address all the relevant issues in a factual and coherent manner); and Accuracy (ensure that the quantifications are systematically neither over- nor underestimated). Concerning completeness, sometimes it is tempting to define a minimum threshold (materiality threshold) stating that a source not exceeding that limit would be omitted from the assessment. However, this is not always enough as in any case, an assessment would be needed to know if the threshold has been met or not. Thus, making the threshold in most cases irrelevant.

unrealistic expectations might be raised with key stakeholders, including local communities. This can not only be an unnecessary reputational risk but could also imperil the achievement of the investment’s objectives or even lead to liability risk for some cases of deception or greenwashing.

Furthermore, it is important to bear in mind that investment activities might show significant trade-offs. For instance, some studies developed by FAO on enteric methane livestock emissions in [Burkina Faso](#), [Ethiopia](#), [Kenya](#) and [Niger](#) have found that even though many cost-effective interventions can reduce the intensity of cattle enteric methane emissions, absolute emissions could increase as well. In addition, it is important to highlight that causation can also occur through omissions or lack of actions (effectively contributing to an adverse impact).

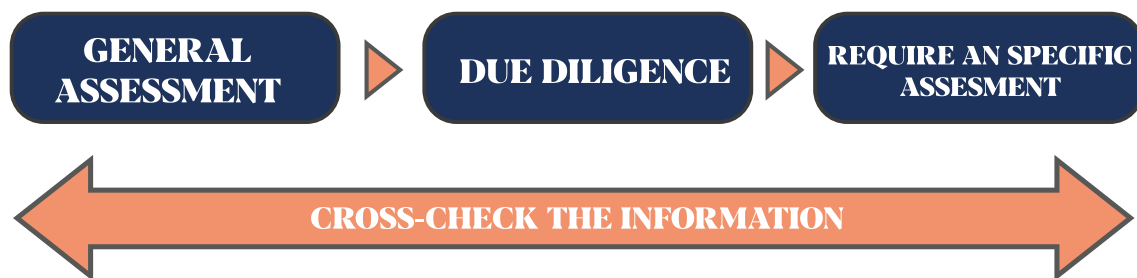
Similarly to a portfolio analysis that evaluates the returns, risks and correlations between all investments, the measurement of SDG impacts should also be extended at that level. This, in turn, besides generating a consolidated impact view of the investments, can also favour the implementation of less profitable investments that, from an operational and impact point of view, significantly improve the impact performance of the entire portfolio.²⁴

Grievances from internal and external stakeholders are also a key component of the assessment process as they allow not only the identification of impacts but also their evaluation. Consequently, processes and adequate mechanisms should be put in place to allow the collection and use of this information for the assessment.²⁵

Investing in investees (untargeted investments)

The assessment of untargeted investments (i.e. investees) can follow a 3-phase sequential procedure (as seen below). It starts with a general assessment of the impacts identified in Step 2, which is normally done online and with desk reports. Then, a due diligence – normally done in the field – is conducted to assess and cross-check specific aspects of the investee (e.g. discussions with clients and stakeholders to know how they are impacted). Finally, the due diligence can be complemented with more detailed assessments for specific impacts

Figure 2: Assessment of untargeted investments



Source: Author’s own elaboration

²⁴For instance, while there are some doubts about the profitability of investing in AIV aggregation centres, operationally they would make the VC more integrated (reducing risks) as well as increase the positive impacts all along the VC (e.g. improved diets, agro-biodiversity, climate resilience and income for producers, especially women).

²⁵Investors can also leverage from multistakeholder platforms – like the one set-up in Kenya for AIVs – as an additional grievance channel and/or to learn from other peer investors, too.

Investing in investees (targeted investments)

The assessment of targeted investments (i.e. projects) can follow a 3-phase sequential procedure (as seen below). It starts with a general assessment of the impacts identified in Step 2. Then a specific and more detailed assessment of one or various impacts can be conducted. Finally, these impacts are translated into the country's SDGs indicators.²⁶

Figure 3: Assessment of targeted investments



Source: Author's own elaboration

Depending on the availability of resources and the degree of the foreseen impact, the general assessment can be done in-house or outsourced. For instance, in Ethiopia, Kenya and Niger the law requires investors to hire a local consultancy firm to do the environmental assessment (NCEA, 2021; NCEA, 2020a; NCEA, 2020b; NCEA, 2015). Nonetheless, this should not prevent investors from complementing this mandatory assessment with their own, particularly when local capacity is not adequate (ENTAG & Resiliencia Ethiopia, 2021). The general assessment can be both qualitative and quantitative, drawing insights from published research and empirical evidence. For instance, taking the case of the measurement of GHG emissions, in the general assessment it is expected that both Scope 1 and 2 emissions be calculated, whilst in a detailed assessment, the Scope 3 emissions should also be shown.²⁷ For the detailed assessment, some tools that can be applied and have been tested in these countries are:²⁸

- **Societal – Land Tenure:** The [Responsible Governance of tenure: a technical guide for investors](#), which provides some high-risk factors that help prevent investors from proceeding with highly risky agro-land investments (e.g. there is an active, ongoing conflict in the project area). The guide also provides information on how to conduct a more detailed assessment.
- **Societal – Gender:** The [Gender Inclusion Self-Assessment Tool](#), although developed as a self-assessment tool, it can also be applied for agro-partners. The tool assesses the business operations from a gender perspective at three levels: human capital, productivity management, and the market.
- **Societal – Money Laundering:** [Mansa](#) is a platform that provides a list of African companies and organizations that have successfully gone through the Anti-Money Laundering and Counter Financing of Terrorism due diligences.
- **Environmental – GHG Emissions:** [Ex-Ante Carbon-balance Tool | EX-ACT](#), which accounts for GHG emissions covering the entire agriculture, forestry and other land use (AFOLU) sector, including agricultural inputs, energy, infrastructure, management of organic soils, coastal wetlands, fisheries and aquaculture.

²⁶A useful guide in how to assess the investors' contributions to the SDGs is FAO's [Guidance on core indicators for agrifood systems – Measuring the private sector's contribution to the Sustainable Development Goals](#).

²⁷Scope 1 covers direct GHG emissions, Scope 2 covers indirect GHG emissions from the consumption of purchased energy and Scope 3 covers other indirect GHG emissions (e.g. GHG from suppliers).

²⁸This list is not exhaustive as there are many other tools that can be used. However, as pointed out in a study of 42 tools, most of them might not be applicable in all contexts, such as in East Africa (Ndambi *et al.*, 2020).

- **Environmental – GHG Emissions:** [FRESCOS](#) is a tool for calculating the carbon sequestration of forestry and agroforestry projects.
- **Environmental – GHG Emissions:** [Global Livestock Environmental Assessment Model \(GLEAM\)](#) is a specific GHG calculator specific to the livestock sector. It estimates the climate benefits of technical improvements in animal husbandry, feed, and manure management.
- **Environmental – GHG Emissions & Economic:** [EX-Ante Carbon-balance Tool for VC | EX-ACT VC](#) accounts for sources of GHG emissions and farm-to-retail socioeconomic benefits when designing projects.²⁹
- **Environmental – Biodiversity:** [Biodiversity Integrated Assessment and Computation Tool | B-INTACT](#) accounts for the ecological value and biodiversity sensitivity of a project.
- **Environmental – GHG Emissions & Biodiversity:** [Adaptation, Biodiversity and Carbon Mapping Tool \(ABC-Map\)](#) is a geospatial app that holistically assesses the environmental impact of investments in the AFOLU sector.
- **Environmental – Land, Soil and Water Resources:** the [Global Agroecological Zoning version 4 \(GAEZ v4\)](#) helps investors to cross-check their natural resource needs compared with available resources.
- **Environmental – Soil:** the [GSASmap](#) is a tool that helps to identify salt-affected soils where sustainable soil management practices could be adopted to halt salinization and sodification.
- **Environmental – Multifaceted:** the [Hand-In-Hand Geospatial Platform](#) is a platform that allows the customization of several data maps (e.g. armed conflicts, agroecology, water, land and soils) and statistical datasets (e.g. world development indicators) to analyse trends and even real-time gaps or opportunities.
- **Environmental, Societal & Economic:** The [response-Inducing sustainability evaluation \(RISE\)](#) is an interview-based method for assessing the sustainability performance of agricultural products at farm level.
- **Environmental, Societal & Economic:** The [The sustainability assessment of food and agriculture systems \(SAFA\)](#) tool assesses the four main dimensions of sustainability: environmental, economic, social and governance.
- **Environmental, Societal & Economic:** The [Indicateurs de Durabilité des Exploitations Agricoles \(IDEA\)](#) tool is a sustainability tool that covers three dimensions of sustainability with 53 indicators.
- **Environmental, Societal & Economic:** The [public goods \(PG\)](#) is a comprehensive sustainability assessment tool for farming systems. It offers a rapid and succinct overview of a farm's performance, using a range of environmental, economic, and social indicators.

Once the impacts have been measured, an external revision is highly recommended. This can take the form of an expert opinion on the impact analysis, a verification against internal or external standards, obtaining certification from a certified authority on impact evaluation,³⁰ or an evaluation through a rating.

Assessing the resilience of both untargeted and targeted investments

The assessment of resilience is part of the impact assessment (for both targeted and untargeted investments).³¹ However, in order to highlight its importance – as seen during the COVID-19 pandemic and the increasing risk of climate change – this section was deliberately divided into a specific section to provide general guidance on how to conduct it within this framework. Resilience can be measured at different levels, namely at VC actor level, at the whole VC level and at the agrifood system level. Since resources might be limited, and few sustainability tools include it (Ndambi *et al.* 2020), it is suggested

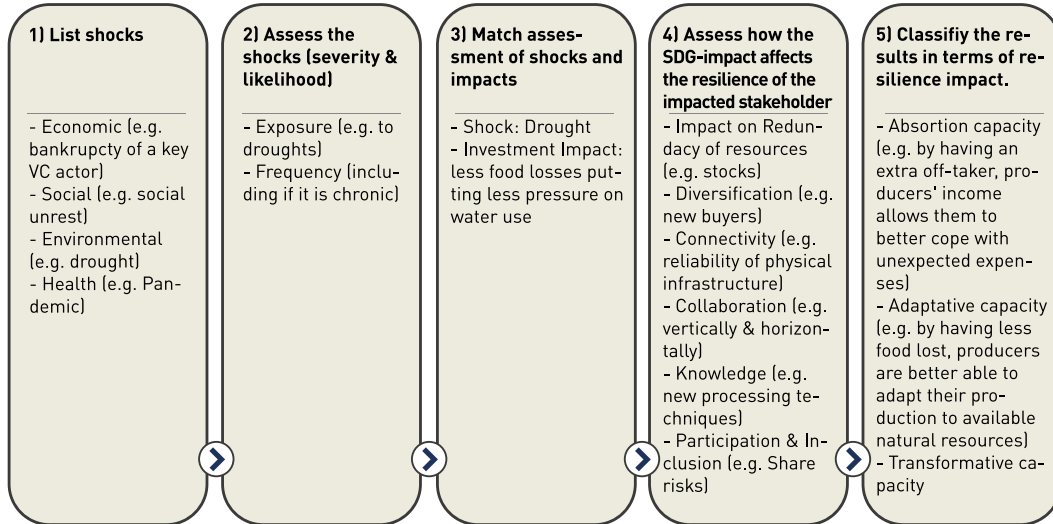
²⁹See Annex 1 for its application in two real investment proposals (a public and a private one) in dairy in Ethiopia.

³⁰For instance, [ISO 14067:2018](#) is a certification for quantifying a product's carbon footprint.

³¹Resilience is the capacity of an agrifood VC actor to continue generating and delivering value (food products and services) in the face of abrupt or gradual disturbances in supply or demand through the recovery from unexpected shocks, the avoidance of tipping points, and adaptation to ongoing change. This includes anticipation, mitigation, preparation, absorption, adaptation and recovery (FAO, Forthcoming).

that at least the resilience of impacted stakeholders be assessed.³² Against this background, four stages are recommended to assess the resilience of the investment impacts.

Figure 4: Assessing resilience



Source: Author's own elaboration based on FAO (Forthcoming).

Interlinkages between impacts

Agri-food systems might be so connected that one activity might cause one or multiple impacts, resulting in a wide range of linkages between impacts (high, medium and low). This, from a strictly assessment perspective, means that accurate impact assessments can be complex.³³ However, from a sustainability standpoint, this also means that the management of impacts can be significantly enhanced as impacts can be multiplied, synergies be found, trade-offs be better identified and even negative impacts be better off-set or minimized.

B.4. Manage the SDG-related impacts

Step 3 has allowed us to define a baseline of impacts. The next step is to divide activities and features of the investments into two categories “must-do” and “complementary”. Essentially, “must-do” activities and features are unavoidable for the investments, whilst “complementary” ones allow the investee(s) and investors to maximize or minimize certain impacts.³⁴ This valuable information will determine what kind of option investors have to better manage the impacts, which are:

1. Divest – Exit. The negative impact is high. Consequently, the investor can request the investee(s) to stop certain “complementary” activities/features and opt for less harmful ones. In cases where this is not possible (i.e. “must-do” activities or features), the investor should opt to divest. If this happens, and unless the impact is very harmful, the investor should have a divest-exit strategy in order not to disrupt the activities of the investee(s).

2. Treat impact. The negative impact is significant as is its likelihood. Consequently, the investor may act to reduce the severity and the likelihood, or even both. This includes compensatory

³²In fact, the resilience assessment at a VC actor level is an important building block to – at least partially – evaluate the investment impact on the resilience of the whole VC. For instance, the introduction of indigenous vegetables into mono-crop systems can mean an increase in revenues for the smallholders (i.e. an intrinsic impact or direct impact) but also increase the economic and climate change resilience of the VC, as production is more stable and soil quality is improved. The latter can even benefit the other VCs the producer works on and at a higher level so as to maintain biodiversity.

³³For instance, although science and research have made significant strides during the last years to measure the negative impacts linked to biodiversity loss and climate change and how they are connected, their assessments still rely on imperfect – but improving – models.

³⁴For example, an investment to build a warehouse for the storage of onions will lead to “unavoidable” GHG impacts caused by the use of building materials. While opting for renewable energy instead of fossil fuel for an investment's energy requirements is a complementary feature that maximises its positive impact.

actions to reduce or off-set the severity of the impact as well as promoting access to transparent and effective mediation, grievance, and dispute resolution mechanisms, particularly for the most vulnerable and marginalized.³⁵

3. Increase impact. The effect of positive impacts is significant, and their likelihood is considerable or high. Thus, investors alongside investees can promote and increase the activities causing these positive effects or can opt for “complementary” features to boost the positive impacts.³⁶ For the former, investors can design their investments to be sustainability-linked. For instance, linking the expected financial returns to key impact indicators.³⁷ Thus, the achievement of positive outcomes also financially benefits the investee(s) and creates the right incentives for high-impact activities. Regarding complementary activities or features, investors alongside investees can design corporate social responsibility (CSR) activities and features that complement and maximize the positive impacts of certain activities/features.³⁸ It is worth mentioning that although all SDGs and impacts are important on their own account, the capacity of investors is limited. This is why investors can prioritize and focus on SDGs and impacts that are more relevant for their stakeholders or on which investors have better implementation skills.³⁹

4. Tolerate impact. Negative impacts with low severity and low likelihood. Since lack of resources might be an issue, it is understandable that investors might not respond equally to all possible impacts and subsequently choose to tolerate and “do nothing” regarding some impacts in the short-term. However, investors should also seek ways to minimize and avoid these negative impacts whenever possible, including plans to mitigate them in the future.

5. Transfer impact. In specific cases, it is possible to transfer and insure against a negative impact.⁴⁰ This might be done by allowing an external entity or partner to manage the negative impacts. For instance, specialized NGOs might be more prepared to conduct certain activities that result in positive outcomes or might be more prepared to deal with negative impacts. Furthermore, investors can insure the stakeholders that might be negatively impacted by the investment.

Importantly, it is worth mentioning that managing the impacts is a dynamic activity and should not only be done at the start of the project or when a negative impact becomes urgent. Thus, in order to monitor the impacts and how they evolve effectively and in a timely manner, **from an individual perspective**, investors should establish OKRs (Objectives and Key Result indicators) and procedures to strengthen their impact frameworks, including setting-up lessons and learning procedures.⁴¹ In this regard, investors should also leverage from their own or their partner’s information and technology systems to support the monitoring and evaluation of the impacts. **From a broader investment ecosystem (or VC) perspective**, the management of the trade-offs and synergies emerging from several SDG-related impacts require dialogue and coordination among all relevant actors. A multi-actor, or group, approach to managing SDG-impacts, such as through the multistakeholder platforms discussed as part of the AgrInvest-FS project, could help individual investors improve, or upscale, the SDG-related impacts of their own investments.

³⁵Concerning off-setting, it is important to point out that they should not be the sole or the default strategy for a negative impact. For instance, taking the case of GHG emissions, when there are no reduction alternatives in the short-term, off-setting is a good option. But when there are GHG reduction options available, they should also be undertaken (Hagerberg, 2019).

³⁶For example, by giving equal resources to women, agriculture output in 34 developing countries could rise by around 4 percent (FAO, 2011).

³⁷Although this is a concept very closely linked to loans and financial institutions, the sustainability-linked principles could be applied to a wide array of investment products. For more information about sustainability-linked loans, see [LMA Guidance on Sustainability-linked Loans](#).

³⁸There are many agribusiness conducting CSR activities, as in Ethiopia (ENTAG & Resiliencia Ethiopia, 2021) and applying the guidelines could help them strengthen their current CSR programmes.

³⁹In some cases, impacted stakeholders will convey to investors how they can be supported. This will also depend on the type of investment. For example, whilst debt investors might only be required to comply with local regulations or to the “do-no-harm” principle, equity investors could be required to go beyond them.

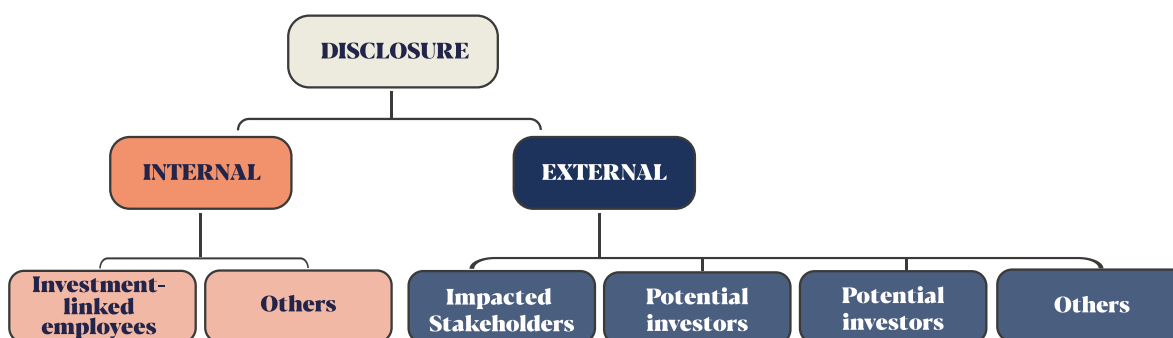
⁴⁰The management of the impact can be transferred, though the accountability remains with the investor or investee(s).

⁴¹Indeed, SDG-impacts can also be managed with a “group” approach, as is the case for multistakeholder platforms.

B.5. Disclose the SDG-related impacts (including addressing the audience)

Disclosing the SDGs'-related impacts and overall impact framework (e.g. strategies and main procedures) can be a valuable tool to receive feedback from key stakeholders as well as a way to promote transparency and best practices in the field.⁴² In this guide, it is referred to as Step 5 but it is indeed a crosscutting theme that could be used for every step undertaken. Against this background and in order to maximize understanding, it should be divided by type of stakeholders, thus:

Figure 5: Assessing disclosure by type of audience



Source: Author's own elaboration.

Internal disclosure

Although sometimes neglected, internal disclosure is as important as external disclosure as it is a necessary tool for the timely promotion and adoption of SDG-impacts on investment decisions. In this regard, this category can be further subdivided according to the type of information, or the role played by employees in the investment decision process: such as employees actively working in the investments, e.g. senior managers or project designers, and other employees that do not have any role in the investment decision process. Similarly, impact-related information should not only follow the same procedures and policies of business-related information but should also be incorporated in these established mechanisms, effectively becoming a permanent component.

External disclosure

The external disclosure should be adapted to the type of stakeholders (as shown in Figure 5). As highlighted previously with the establishment of grievances mechanisms for impacted stakeholders, their consideration is not only a formality as their feedback is highly important for the success of the investment. In this light, the language, the indicators and the mechanisms to communicate with external stakeholders should be adapted to their awareness level. Moreover, it is important to highlight that the impact-information gathered, analysed and managed – as in Steps 2, 3 and 4 – should be a key component of the communications. Indeed, strong disclosure practices are an important step to systematically look at the impact of investors and VC actors not only in terms of reducing risks and increasing returns for themselves (e.g. obtaining the buy-in from the impacted stakeholders), but also as a contribution to the sustainable development of their broader ecosystem.

Concerning the disclosure towards public authorities, this can take several forms, such as mandatory documentation to obtain a special licence (e.g. in Ethiopia), for the acquisition or leasing of land or access to special subsidies or tax breaks//tax relief, among others. Normally, there are specific norms and regulations put in place for the disclosure of this type of mandatory information. However, investors can go further and complement this required information with other SDG-impact information that they have. This can stress their commitment to making sustainable investments and help authorities to better assess the investment too.

Sustainability is increasingly becoming an essential aspect for many investors, especially those that take decisions through the triple lens of risk, return and impact. And, since investments are frequently undertaken by multiple investors, determining how to communicate with them is important to find impact-aligned potential investment partners as well as seeking suitable funding alternatives.⁴³ Against this framework, this guide has identified two documents that can be strengthened with SDG-impact information: investment pitches and investment proposals.

Investors will also have to communicate with other stakeholders. In this regard, the standardization of reports (using tools such as the [Global Reporting Initiative](#) and [Business Reporting on the SDGs: An Analysis of the Goals and Targets](#)) and the inclusion of SDG-impact information in annual financial reports are important steps. Furthermore, investors will seek appropriate disclosure on impact issues from the entities in which they invest.

Finally, among certain investors, there is a fear that increased disclosure could lead to liability concerns. However, this is only applicable for cases when the disclosure mis-states or deliberately omits material information and not when the assessment is inaccurate. In other words, liabilities originate with fraudulent and reckless conduct and not with assessments made in “good faith”.

C. Implementation of the guide in specific VCs

The case of onions in Niger

Background, VC bottlenecks and opportunities

The onion sector in Niger dates back to the 17th century. The crop is embedded in the sociocultural fabric of the country, with production practices, including seed generation through to commercialization, passed down from generation to generation. Onions from Niger, especially the “Violet de Galmi” variety, is popular in the wider region due to its pungent taste. In fact, the country is the largest exporter of onions in the region, though the informality of the sector and the lack of reliable data makes it difficult to gauge just how much is exported (Cortese *et al.* 2021).

Overall, the VC is a significant source of employment and livelihood, as several actors are involved in the VC with often overlapping roles. While producers are numerous,⁴⁴ and mostly operate on a small scale, there are a few large-scale farmers who also tend to be traders. Moreover, there are several local intermediaries that facilitate transactions with traders, most of whom come from neighbouring countries. Women are the predominant actors in processing, making onion powder both for domestic consumption as well as for export.

There are several bottlenecks in the VC, though arguably the lack of efficient post-harvest management, especially storage, could be the most relevant one. Indeed, more efficient storage – both at the farm level and during transport⁴⁵ – could create significant opportunities to boost the incomes of farmers, most of whom end up selling their crop at the same time, causing a glut in the market. By spreading sales over a longer period and reducing food losses thanks to storage, prices can remain more stable throughout the year, benefiting end-consumers as well. In other words, the positive economic impacts from suitable storage are also intimately linked to the other aspects of sustainability, such as the efficient use of scarce resources – like water – that result from lower food losses.⁴⁶

However, to maximize the benefits of improved storage, production practices need to be enhanced too. For instance, by increasing the use of improved seed varieties, improved irrigation facilities, and the precise and timely use of fertilizers (i.e. without proper production techniques, food losses will probably remain high).

The following sections present further insights related to the onion VC in Niger to illustrate SDG-related investment considerations, in line with the guidance.

Raising awareness and developing an organizational culture for SDG-impact investments

It seems that most of the internal and external VC actors are acutely aware of the main bottlenecks in the VC and the main SDG impacts generated,⁴⁷ although they (especially the farmers) may not refer to the impacts in terms of either SDGs or sustainability even if they are fully aware of their impacts.

⁴²Leveraging the power of impact transparency is indeed key to achieving a future in which investment decisions are increasingly taken through the triple lens of risk, return and impact (ITF, 2021). Moreover, it seems that most VC actors only look at their impacts in terms of their own risks, and not the further benefits, like sharing best practices in the VC, proving that sustainability is not only a risk and that these practices can make positive contributions to the sustainable development of their broader ecosystem and stakeholders SDGs.

⁴³For instance, arguably the SDG-impact information gathered and analysed by a processing AIV company in Kenya played a key role in a successful funding application to an investment fund (Kenya Climate Ventures).

⁴⁴Directly or indirectly, over a million people depend on this VC for their livelihoods, with producers forming the largest group (Wur *et al.*, 2012b).

⁴⁵Indeed, in the country, there is no dedicated truck fleet for onion transport, with transport facilities often being inadequate, which affects onion quality. This is also compounded by the poor quality of the roads. Moreover, there are also challenges in the marketing phase when most exports happen via informal channels which cannot assure good prices for farmers, and can in fact entail several other informal payments along the market route.

⁴⁶In fact, the investments to improve storage can also generate negative impacts. For example, there will be GHG emissions linked to the type of material used for building the infrastructure.

⁴⁷E.g. farmers organizations and traders as well as development partners (e.g. the Swiss Agency for Development and Cooperation, LuxDev, KfW Development Bank and the World Bank).

Identifying the potential and current SDG-related impacts

Currently, in Niger, there are several small-scale development projects working in this VC. Most of them primarily aim at boosting production. However, introducing sustainability into this food system entails various challenges and trade-offs. For instance, while normally the use of agroecological practices may be desirable, given the climatic and soil conditions in some locations, the adequate use of synthetic fertilizers may be needed. Moreover, the promotion of improved practices like the purchase of certified seeds, may be hindered by mistrust within the VC. For instance, farmers may be reluctant to buy improved varieties of seeds and may prefer to use their own seed due to previous unfavourable experiences or the lack of availability of improved seeds.

Concerning storage, there have been pilot initiatives to construct different types of onion warehouses, of which one particular type developed by the FMCN-Niya project seems to be the most effective.⁴⁸ However, although there is a need to scale up these facilities, special attention should be given to regional differences as the same kind of facilities might not be suited to all locations and contexts.

Similarly, while investments in improved standards of quality and production could contribute to better prices for farmers, in practice, many of these investments might be price-constrained in that the demand for higher quality but pricier onions might be very low (especially if higher quality standards mean higher prices for consumers).

Assessing the SDG-related impacts

The precise SDG-related impacts of improved production practices and storage facilities in this context need to be assessed, but anecdotal evidence and some preliminary results suggest that these are significant. For instance, successful storage of onions can reduce food losses and waste by 25 percent to 5 percent (WUR *et al.*, 2012a; RECA, 2014) or to less than 5 percent (ANFO, 2021) and thereby reduce the carbon footprint associated with it.⁴⁹ Moreover, it can increase the availability of the product in the market and also help in enhancing the efficiency of this VC. Conversely, depending on market dynamics, onion prices could either increase or decrease. For instance, less glut in the market could lead to lower prices for end-consumers, and higher prices for producers during the lean season.⁵⁰ These positive impacts may be somewhat reduced by a rise in production, which entails an increased intensity of resource use (water and fertilizers).

Onions have a relatively low water footprint, compared with many other crops (Healabel, 2021). It is therefore very suitable for small-scale irrigation, even during the dry season. Scaling-up these facilities as envisaged in the small-scale irrigation strategy of Niger (SPIN) is expected to bring significant benefits. These include the boosting of farmer incomes and a reduction of rural poverty (Tillie *et al.* 2020).

Managing the SDG-related impacts

Investments, especially in the storage facilities of the FCMN-Niya type need to be upscaled in order to extend their positive SDG-related impacts. Conversely, given the inherent trade-offs in the different dimensions of sustainability, there may be a need to tolerate or mitigate certain negative impacts. For instance, storage facilities may provide incentives to increase production either through improved techniques or through more land under cultivation. The latter can be a problem as unfavourable current

⁴⁸FCMN-Niya (Fédération des coopératives maraîchères du Niger) is one of the most important stakeholders in the onion VC, and they have previously been involved in the design and implementation of storage facilities. In fact, some of these warehouses can store around 30 tonnes of onions for up to 6 months. Consequently, the ratio of losses is lower (less than 5 percent). These warehouses, however, are relatively expensive, costing around EUR 10 000 [see Cortese *et al.*, 2021 for more details].

⁴⁹On average, it takes around 0.5 kg of CO₂ emissions to produce 1 kilogram of onions (Healabel, 2021).

⁵⁰According to Rabiou *et al.* (2018) the price per 100 kg bag in Tillabéri could rise from EUR 12-23 to as much as EUR 61-76 after four months of storage, with net margins of EUR 840 per hectare.

land tenure practices (e.g. towards women), might still linger. Indeed, this may require additional interventions to address these challenges as well.

Similarly, linking investments to improve storage management with other interventions to strengthen the entire VC, most importantly with marketing outlets,⁵¹ could be a compelling opportunity, from a social, environmental and economic perspective. To this end, marketing outlets could pilot the sale of improved production inputs so the quality of onions stored would be increased (provided this does not lead to intolerable price hikes for consumers). For this to work, however, these outlets would need to be located close to the production sites. Farmers may have to purchase improved inputs to be able to use specific storage facilities, which will ultimately use them to market their onions in the wider region. This could be seen as a way to manage the impact of an investment, accordingly to what was explained in Step 4.

In such a scenario, linking production to the marketing outlets might help in cascading the “SDG-thinking” to the other VC stages. For instance, making access to storage conditional upon the use of improved techniques could act as a real incentive to use improved production techniques. Moreover, over the medium to long-term, building up trust in more commercial operations among VC actors who are more used to traditional ways of working might be needed. Nonetheless, it is important that these kinds of conditionalities are piloted to carefully examine all their (positive and negative) effects and they should be implemented with adequate training for the farmers.

Disclosing the SDG-related impacts

It is important to disclose SDG-related impacts of investments in onions (like price impacts on end-consumer and producers), not only to ensure accountability but also to engage in a process of iterative and collective learning to identify and pursue those interventions that bring long-term social, environmental and economic sustainability.

The case of rice in Burkina Faso

Background: key actors investing in the rice VC in Burkina Faso

In Burkina Faso, rice is a major staple crop and plays quite an important role in the economy, both as a source of income and as an important element in the diet of many households, especially in urban areas. The AgrInvest-FS project has analysed the investment dynamics of private sector actors in this VC, mainly focusing on processors (including women parboilers)⁵² and producers’ cooperatives that supply paddy rice to these actors in the west and south-eastern regions of the country. The project identified four different company profiles, differing in their production techniques, marketing, processing, and distribution systems. These include: (1) well-established, fast-growing white rice processing companies of medium and relatively large size (in terms of volumes of rice produced); (2) emerging white rice processing enterprises – of the mini rice mill type, with moderate growth but still limited investment capacity; (3) the parboiled rice enterprise, mostly made up of a network of women parboilers; and (4) paddy rice producing cooperative unions established for some time that have an interest in investing in processing activities. These companies display distinct strengths and weaknesses, as well as varying levels of interest and ability to incorporate SDG-impacts into their investment decisions (Koutou *et al.*, 2021).

⁵¹Marketing outlets were established by the government and some VC actors to formalize the VC.

⁵²Rice parboiling is a process that involves partially boiling the rice in the husk before milling to protect it from breaking during milling, preserve nutrition and enhance its quality (AfricaRice, 2020). Parboiling is generally done by women, individually or organized in cooperatives.

In what follows, we focus on two SDG-related impact areas that these VC actors should consider in order to make more informed and sustainable investment decisions in the rice VC: (1) socioeconomic impacts related to employment and workers' rights; and (2) environmental impacts related to natural resources (notably land and water) and climate change-related risks. The level of awareness, concern and action taken about these impact areas varies among the VC actors, although most of them have experienced, or expect to experience in the near future, difficulties due to those social and environmental changes.

For each of these impact areas, we briefly describe the current context and challenges the VC actors face, review existing practises, and provide recommendations to improve or scale up those to better manage their SDG-impacts.

Identification and assessment of the potential and current SDG-related impacts

1. Socioeconomic impacts related to employment, workers' rights and other social challenges

Although in Burkina Faso, the working-age population is relatively abundant, and particularly young, the level of employability remains generally low. In fact, over three-quarters of young people are employed in the agricultural sector (with higher rates in the rural areas), but these jobs are largely characterized by informality, working poverty, and vulnerable employment. Young people are consequently seeking other opportunities rather than participating in the agricultural sector. Some of these opportunities include working in the mining sector – where work conditions are similar to those in the agricultural sector, but the pay is higher (RVO, 2019). Migration is another opportunity young people are exploring as an alternative to meeting livelihood demands. There is a lot of internal migration from rural areas to urban areas as well as seasonal migration to Côte d'Ivoire and, increasingly, migration to destinations outside the region. In addition, conflict and displacement in the country have also affected the availability of agricultural workers.

A combination of these factors has resulted in a shortage of labour in the agricultural sector in general and the rice sector in particular. As such, many actors in the VC report challenges linked to the insufficient and low-quality supply of labour during periods of high demand for agricultural work (Koutou *et al.*, 2021). Although better employment opportunities exist in processing and other stages of the rice VC, most employees do not have the relevant skill set to access these opportunities (RVO, 2019).

Moreover, informal workers are not entitled to any welfare benefits or provisions. This is particularly exacerbated during the lean season – the period between planting and harvesting – when job opportunities are scarce and incomes decline sharply. This contributes to migration during these periods to other regions or countries to seek alternative employment.

Besides the employment-related challenges outlined above, there are other factors that limit the participation of young men and women in the rice sector. Access to land is a key factor for participating in rice producing activities. As such, it can be a key obstacle for potential investors without adequate access to it, particularly for women who, due to cultural norms, rarely inherit land from their families.⁵³ Access to finance is also limited for various reasons, including lack of collateral to guarantee loans. This places a limitation on the type of agriculture and marketing activities these men and women can engage in (mostly small-scale and noncapital-intensive) and on their level of participation in the VC. While women have tried to overcome these limitations by engaging in cooperative farming and marketing, there is still a sizable gap between the reality and their potential for participation in the

⁵³Legally women have the right to land, though only 32 percent of women have access to land through tenure rights and rental, and only 8 percent own land (RVO 2019).

development of the rice sector (Lenti, 2019). Gender dynamics also contribute to the role women play in the rice VC, with women taking on a more important role in processing activities, especially traditional parboiling (Koutou *et al.*, 2021).

In summary, to promote the sustainable development of the rice sector in Burkina Faso, individuals and entities contemplating investments in the rice VC ought to be aware of the need for skill development measures, particularly for young men and women. They should also be aware of constraints to the access to the factors of production, land, and financial capital in particular, which is related to the uneven distribution of productive factors among different segments of the population and economic actors. Without any mitigating measures by investors, this unequal distribution could worsen.

2. Environmental impacts related to natural resources management and climate change in the rice sector

Worldwide rice production requires about 40 percent of the world's irrigation water, putting intense pressure on scarce water resources.⁵⁴ In Burkina Faso, rice production is linked to a constant increase in water use. Irrigated perimeters and lowlands in the south and eastern regions suffer from management problems linked to inadequate policies, conflicting interests among water users and ageing infrastructure.⁵⁵ Poor management entails inefficient water use and increases production costs. For instance, in irrigated systems, water use represents the highest share of the total cost of production (Salman *et al.*, 2020). In addition, rice production has been linked to other negative environmental externalities, such as air and water pollution as well as soil degradation (due to the use of chemical fertilizers and pesticides). Sustainably investing in the rice VC in Burkina Faso will thus require better land use planning and more sustainable water management to increase production while preserving natural resources (D'Alessandro and Tondel, 2021).

Processing and parboiling activities also require large amounts of water (Gunasekera, 2016). They may also impact water quality due to poor waste management or lack of environmental awareness.

In the domain of environmental impacts, both climate change-related risks and resilience merit particular attention. The expected rise in the frequency of extreme weather events due to climate change, such as floods, droughts and heatwaves, and in the frequency of related biological and ecological disturbances (notably crop and animal pests and diseases) will have significant, widespread and long-lasting impacts on the agricultural sector, including the rice segment. This is unfortunately compounded by the fact that there is a lack of insurance products to protect rice producers from these climate-related hazards.

According to the Intergovernmental Panel on Climate Change (IPCC), rice crop yields are expected to decline in all future scenarios (Van Oort and Zwart, 2017). Although rainfed rice systems are particularly vulnerable, lowland systems also face increased water stress and competition from other uses (Knaepen *et al.*, 2017). In Burkina Faso, the negative effects of climate change and variability, including low rainfall and its poor distribution in time and space, have already led to reduced rice yields, and this trend is expected to continue in the future (Van Oort and Zwart, 2017). In particular, climate change would increase the frequency and severity of droughts. The predicted drop in water availability should therefore be a cause for concern on the part of investors.

⁵⁴As a reference, due to the unproductive use of water flows, normally rice requires about twice as much water as other cereal crops.

⁵⁵In Burkina Faso, lowland rice cultivation (with partial or no water control) represents 67 percent of the rice-growing area and 42 percent of national production, while irrigated rice systems account for 23 percent of rice areas and more than 50 percent of national production.

At the same time, rice production leads to negative climate impacts because of the high GHG emissions of some rice cultivation systems. For instance, paddy fields produce considerable amounts of methane, a potent GHG, while the use of chemical fertilizers in some rice cropping systems also contributes to GHG emissions. GHG emissions from paddy production in wetlands are fairly sizeable, although they only account for a small part of rice production in Burkina Faso (Koutou *et al.*, 2021). In consequence, investors in the Burkinabe rice sector should be mindful of regulatory risks and assess the risks of operating in this sector owing to the possibility of the future enactment of laws and regulations to abate GHG emissions in the agricultural sector.

Managing the SDG-related impacts

Private sector actors investing in the rice VC in Burkina Faso can act to reduce the severity and the likelihood of the negative socioeconomic and environmental impacts of investments, and/or promote and increase the activities that lead to positive effects – to the extent possible and according to their capabilities. Moreover, the management of SDG-impacts at the individual investor level can be complemented by improvements in the broader investment ecosystem or VC. This may require closer dialogue and coordination between the private sector and the technical and financial actors active in the VC.

1. Managing socioeconomic impacts

To generate decent jobs for all actors along the VC, especially for women and young people, private investors may support the development of more inclusive, yet economically viable, business models that also promote larger sharing of profits and lower transaction costs. Lessons can be learned from the experience of the National Union of Women Parboilers (UNERIZ), who developed a franchise model that involves supporting women to create rice parboiling micro-enterprises.

Also, in the case of large-scale investments taking place in agricultural growth poles, like the one planned in western Burkina Faso (Samandeni) and drawing from the experience of previous projects like the Bagré pole,⁵⁶ a balance is needed between pure commercial agriculture and agriculture from small family farms. For instance, investment projects should involve local farmers in land use planning processes to preserve local livelihoods. They should also facilitate the access of small producers, women and young people to locally adaptable technologies, services and training (Koutou *et al.*, 2021).

2. Managing environmental impacts and climate change risks

Possible private sector measures to better manage environmental impacts in rice investment projects include implementing sustainability certifications like the [Sustainable Rice Platform \(SRP\)](#) assurance scheme which, in a pilot conducted by the International Rice Research Institute (IRRI) in 2016-2017, showed multiple benefits to farmers and the environment such as a 20 percent saving in water, a 10 percent increase in farmer income, and a 50 percent reduction in GHG emissions (UNEP, 2019; Rikolto, 2019). In Burkina Faso, a number of actors, including the Belgian NGO Rikolto and GIZ, have been working to roll out the SRP label among smallholder rice producers.⁵⁷

Adopting more environmentally sustainable farming practices, like better seeding techniques, however, is a gradual process that requires a shift in incentives and a firm commitment from farmers. For instance, producers may be resistant to changing their cultivation practices for fear of an increase in costs or a reduction in yields. A possible solution is strengthening market linkages between producers

⁵⁶The Bagré growth pole in the South-east is one of the main growth and competitiveness pole projects in Burkina Faso. Established in 2017 with the support of the World Bank, the Bagré pole aimed to attract private and large-scale domestic and foreign investments, and to be a model for future growth pole initiatives. However, five years down the line, the project has achieved mixed results in terms of actual investments and has attracted criticism for the limited involvement of family farms in land use planning processes (Daré *et al.*, 2019).

⁵⁷Through the national SRP chapter, which also serves as a forum for multistakeholder dialogue and as a partnership platform.

and millers. Millers can promote the recognition and adoption of the SRP standards among their suppliers and support and reward their application. For example, UNERIZ supports producers in both reducing the use of chemical inputs and aligning practices with the SRP standards. Similarly, the private Burkinabé enterprise Neema Agricole du Faso SA (Nafaso) supports cooperatives and individual paddy producers in the Bagré and Sourou valleys by supporting the uptake of good agricultural practices and supplying certified seeds of improved varieties.

The development of rice-fish farming systems could also help rice producers in Burkina Faso in using scarce water resources more profitably and efficiently (Okai, 2018) and might reduce rural emigration. In irrigated systems, combining rice cultivation with fish-farming can enhance incomes and strengthen food security outcomes while improving water use efficiency.⁵⁸ Rice-fish farming also has other environmental benefits, such as the lower use of fertilizers and better pest and weed control (Sawadogo *et al.*, 2020). On the basis of previous experiences, combining rice and fish production requires considerable collaboration and learning among producers, suppliers of inputs and extension services.⁵⁹ Private investors should plan to devote time and resources to cooperation with VC actors to improve the odds of the rice-fish system to be sustainable.

To better manage ecological and climate-related risks, investors may promote the adoption of Sustainable Rice Intensification (SRI) practises. The SRI approach includes solutions such as greater spacing between rice plants, which helps maintain soil fertility and humidity, without flooding the land. SRI practises can double yields while reducing costs by 25 percent and saving up to 40 percent of water. This approach, which was introduced by the West African Agricultural Productivity Programme (WAAPP), has led to an increase in farmers' incomes in Mali. SRI has also shown positive results in Burkina Faso. In the Kou valley, for example, where SRI practises have been promoted since 2009/2010, a substantial increase in yields has been recorded. Other tried-and-tested approaches such as the Smart Valley approach and the alternation of drying and re-flooding periods can contribute to climate adaptation and sustainability in low-land irrigated rice production, which reduces farm-level water consumption and GHG emissions (Richards and Sander, 2014).

A more effective management of climate-related risks also requires investments in more appropriate irrigation systems, storm-water management, drought-tolerant rice varieties and cropping techniques, and local institutional arrangements that alleviate the vulnerability of rice production systems and investments, that is the physical risks of climate change.⁶⁰

Disclosing the SDG-related impacts

The extent to which actors disclose their SDG-impacts, internally or externally, is linked to their level of awareness and capability. As such, disclosing requirements could also be set at different levels of the VC. For instance, reporting on sustainable farming practices may be an excessive burden for some smallholder producers; in this case, disclosing the SDG-impacts at the union, cooperative or miller level may be more effective.

⁵⁸This entails using enclosures and floating cages for rearing fish in the source, distribution and disposal subsystems of irrigation systems (dams and canals). In addition, aquaculture can also be implemented in river floodplains and deltaic lowlands.

⁵⁹In Burkina Faso, several rice-fish farming pilots have been undertaken since the 1980s. For instance, in the rice-growing areas of the Kou valley (near Bobo Dioulasso) and in Bagré, and more recently in the Sourou valley through the farmer-field school approach. As part of this last project, several experience-sharing sessions between producers from different locations (Sourou, Bagré and Bama), provincial directors of fishery resources and environmental officers were organized. The project also enabled other fish farmers to adopt the practice in the developed area of Bagré, which is also supported by the Bagré pole project (Sawadogo *et al.*, 2020).

⁶⁰See, for example, Terdoo and Feola (2016).

Internal disclosure can also be promoted as part of a company's strategic assessment of its activities. For example, the National Union of Women Parboilers (UNERIZ) includes an evaluation of gender and the environment in their strategic development plan.

The case of dairy in Ethiopia (Central Oromia)

Background

United Green (UG) is a private company from the United Kingdom. In partnership with the Ethiopian federal and regional government, UG plans to undertake a USD 250 million agro-investment in Ethiopia, namely setting up an integrated crop and dairy farming enterprise in the Oromia region.⁶¹ The first phase of the project aims at securing the feeding of the cattle with a crop farm on a 15 000 ha farm. The next phase includes working with up to 7 000 dairy-producing livestock, around 20 000 smallholders and a milk processing facility with a capacity of up to 200 000 litres per day.

UG expects co-investments from the federal and regional governments, as well as funding from major development finance institutions such as CDC Group, DFC, IFC and the African Development Bank, the latter showing particular interest in the project.⁶² The aim of working with these financiers is not only financial but also technical, particularly regarding sustainability issues. Thus, in order to strengthen their investment proposal, UG has also requested advice and technical assistance from different development partners. For example, UG is developing a proposal to collaborate with the

[NatuReS](#) programme (implemented by GIZ) to conduct an environmental impact assessment and to co-finance the community engagement and environmental and social aspects of the investment.⁶³ Similarly, a number of sustainability studies might be funded and performed with the support of the United Kingdom's Foreign, Commonwealth and Development Office. Finally, jointly with FAO, through the AgrInvest-FS project, an Ex-ACT VC analysis was undertaken to estimate some impacts of UG's planned operations.⁶⁴

Due to the volatile political situation, the project is currently on hold.

Raising awareness and develop an organizational culture for SDG-impact investments

UG seems to be committed to the SDGs. In their investment proposal, they refer to the "positive environmental and social outcomes within rural communities" that result from their investment. However, one of the key issues is that it takes time to strengthen the sustainability culture within the organization, particularly to consider the integration of SDG-impacts from new investments. For instance, dialogue with different stakeholders on the design, implementation and monitoring of such a large-scale investment takes time, and it seems that the initial time allocated for it was underestimated. In fact, the company's original expectation was to complete the co-design of a community development/CSR component (e.g. farmer field schools and capacity building), and an environmental and social impact assessment in 6-9 months and to start development activities after that. However, the complexities surrounding a number of key risks – related to land tenure and others – have shown that the original time assessment will have to be extended.

⁶¹As of today, UG has already signed an agreement with the Regional Oromia government.

⁶²Since the African Development Bank is already supporting the development of four Integrated [Agro-industrial Parks](#) through the EUR 13.5 million Integrated Agro-industrial Park Support Project, there could be some synergies between this investment and the UG investment.

⁶³NatuReS is a multistakeholder programme funded by the German Ministry for Economic Cooperation and Development (BMZ), the European Union and the Foreign, Commonwealth and Development Office (FCDO).

⁶⁴See Annex 1.

Identifying the potential and current SDG-related impacts

In the case of dairy, in Central Oromia, specific sensitive impacts were identified, such as:

- The need to restore, improve and keep in balance the natural resource base of grazing pastures and cropping areas for feed and fodder. This is because both private and communal arable land are decreasing in availability and degrading due to high pressure from different VC actors seeking to increase local milk production and farm revenues.
- The difficulty of effective inclusion in the mainstream dairy VC of small VC actors, such as: less resource-endowed families, youth, single-headed households as well as smallholder farms, which largely depend on dairy activities to contribute to livelihoods of farm households on very small landholdings.
- Gender division of labour and how it could be affected by dairy intensification.
- In the past, large-scale agricultural investments that displaced local populations have led to social unrest (Woolfrey *et al.*, 2021; Shehadi, 2016).
- The weak bargaining position of local communities against the consequences of unfulfilled promises or contested non-compliance of large-scale investors (Nicolay *et al.*, 2020).
- The current tensions between federal and regional authorities could diminish positive impacts or amplify some negative impacts, especially around the sensitive topic of land.
- Food quality and safety might be an issue all along the VC.

Assessing the potential and current SDG-related impacts

A 2020 study (Ndambi *et al.*, 2020) analysed the suitability of existing tools for assessing societal, environmental and economic impacts of dairy farming systems in East Africa. Using various criteria – accessibility, reliability, adaptability, efficiency, holistic, user-friendliness and visualisation – the study first short-listed 42 tools that address all three of the sustainability components. However, according to the authors, of these 42 tools, four (RISE, IDEA, PG and SAFA) could be applied in the dairy context of East Africa and offer the possibility of assessing multiple dimensions of sustainability.⁶⁵ An example of the use of a specific tool to measure societal, economic and environmental impacts in the dairy sector can be seen in Annex 1.

Furthermore, investments that improve the quality of dairy products are needed. For example, as shown by (Gizachew *et al.*, 2016), dairy feeds and milk are highly contaminated with aflatoxins in the Greater Addis Ababa milk shed, showing that around 93 percent of milk samples exceeded the limit of 0.05 µg/L set by the European Union. Related to this, and concerning the adoption of technology, Mekonnen *et al.*, (2010) found that a major constraint hindering smallholder farmers from adopting and benefiting from advances in dairy technology, in terms of crossbred animals, improved feed technologies and improved management practices, is related to feed. Other constraints, such as lack of market pull and effective regulations around feed and milk quality, seem also to be impacting the adoption of technologies (TRAIDE Ethiopia, 2021).

Managing the SDG-related impacts

There are plenty of impacts and trade-offs that should be managed while investing in the dairy VC in Ethiopia, for instance:

- Environmental impacts should not solely focus on GHG emissions but also on how to trigger farms to transition to regenerative, ecological agriculture, which could be done through

⁶⁵Indeed, the use of the tools largely depends on the type of investment and specific objective of the assessment. Thus, while some investors might want to use a single tool for all 3 sustainability components (as suggested by Ndambi *et al.*, 2020) others might prefer using one or multiple impact assessment tools (See Annex 1)

demonstration farms or [farmer field schools](#). For instance, to ensure adequate monitoring of these impact objectives, a key set of metrics could be the number and pace at which surrounding farms decide to adopt agronomically sound and climate smart practices.

- There is a trade-off between maximizing social benefits for specific marginalized groups, and prioritizing the number of people reached. This certainly requires an understanding of the complexities of this food system to adequately assess the feasibility of working with many smallholders (around 20 thousand, according to UG) and assessing the risk of excluding some VC actors.
- There can be unintended consequences. For example, investments that do not take prevailing gender norms, roles and power relations into account risk perpetuating or worsening gender inequality in Ethiopia. Similarly, appropriate management of expectations is of paramount importance, especially considering how previous social unrest targeted foreign enterprises. Against this background, investment strategies should be contextualized, incorporating information on local power dynamics.
- A model that could address the low supply of quality and affordable feed is the *Dairy Feed Advancing model*, developed by a public-private partnership in Ethiopia. This model enables smallholders to access affordable, quality dairy cow feed, which is pre-financed by a dairy processing company. As a result, productivity increases, income for the farmers increases, the supply of quality milk for the processor is more reliable and feed producers diversify their offtakers with a new customer base. The model combines improved access to inputs, with a secure marketing channel and technical and management training tailored to smallholders' needs (Abebe *et al.*, forthcoming; Van der Lee *et al.* 2018). Moreover, the use of price differentiation based upon milk quality supplied by smallholders results in improved quality and higher volumes of milk for the aggregator (e.g. a cooperative), which can then sell to larger dairy processors.

Disclosing the SDG-related impacts

As mentioned earlier, UG seems to be proficient in the discourse around SDGs. However, within their investment proposal, it is not always clear what specific outcome(s) they are mainly trying to achieve and why, which could be an important improvement point to enhance their external disclosure information. Since UG's investment proposal size is significant and with multiple impacts, the explicit use of tools/methodologies like the Theory of Change could be very helpful to underscore the SDG impacts and link them.

The case of African indigenous vegetables (AIVs) in Kenya

Background

Specific AIV value chains in Kenya, like Amaranthus, cowpeas, nightshade and spiderplant have the potential to provide multiple positive impacts in different domains (diversified diets, women's empowerment, agro-biodiversity protection and better income for producers, among others). These VCs are mostly led by small-scale farmers. Processing is minimal - in spite of the multiple benefits of doing so. Thus, most of the AIVs are sold fresh and in very small volumes. In Kenya, the AgrInvest-FS project supports the sustainable development of the AIV value chain which is currently facing several constraints to private investment, such as: a fragmented VC with weak coordination among VC actors; limited access to finance for all VC actors; inconsistent supply; the perishability and seasonality of the products; and unstable demand. The political economy and VC analyses undertaken (Rampa and Were, 2021) showcased a number of opportunities to overcome these bottlenecks: (1) public-private partnerships to establish aggregation centres for AIVs, (2) public procurement schemes for schools and hospitals, (3) processing facilities (especially to blend AIVs and maize flours), and (4) the adoption of safety and sustainability labelling schemes.

These pathways are examples of initiatives that combine the need to attract more investments in the AIV value chain with the objective of enhancing their SDG-impacts. Given the potential of effectively matching the growing demand in the largest Kenyan cities with the supply from the main AIV producing areas in the country, several actors are considering investing in this VC. In fact, many investors are already doing so, with innovative business models, such as contract farming and vertical integration. Drawing upon Rampa and Were (2021), the following sections provide sustainability considerations on current investments in the AIV value chain in Kenya and on the above-mentioned pathways to stimulate further investments, and illustrate how the five steps presented in this Guidelines document could help strengthen and incorporate SDG-impacts in the investment process.

Raising awareness and developing an organization culture for SDG-impact investments

Awareness of the importance of the SDGs can increase the likelihood of investors adopting and promoting more sustainable investment decisions. Most VC actors look at the development benefits of investing mostly in terms of reducing risk for their business (e.g. limiting soil degradation because it is an operational risk) rather than looking at a broader level (enhancing their own and the whole VC SDG-related impacts).⁶⁶ However, the work by AgrInvest-FS on AIVs in Kenya showed that the MSMEs, farmers organizations and small financial intermediaries (e.g. Savings and Credit Cooperative Organizations – SACCOs) that are more aware and explicit about the development benefits of AIV uptake (improved diets, promotion of agro-biodiversity, climate resilience, and incomes for the rural poor, especially women) are the ones that are more willing to expand their own investments in the VC and to promote the engagement of more investors.

Raising awareness about investment impact, moreover, should not be the responsibility of a specific person or unit within the organization, but should be promoted by all actors involved in the investment process. For instance, at a macro-level, all members of a public-private partnership for AIV aggregation centres should raise awareness about all the possible outcomes (e.g. nutritional ones) of more efficient collection and distribution of AIVs, beyond solely stabilizing prices and avoiding post-harvest losses. In addition, at an individual level, this was seen in the case of MACE Foods Ltd, a medium-sized enterprise producing packaged dried AIVs and controlling the entire chain from its own registered seeds to contract farming to supermarkets delivery, promoting the positive SDG-impact of their growing business and investments. This seems to be a shared commitment by all those involved, from the Managing Director to the farmers groups to the seed growers.

Identifying the potential SDG-related impacts

It might be difficult for VC actors and investors to identify the possible sustainability impact of their own new activities or of those undertaken by a new partner (an investee). Therefore, actors already established in a VC should learn from their past and current experience for the identification of the potential impacts of a new investment. In the case of Kenya, players such as MACE Foods and the Nyamira North Women Sacco indeed used previous experiences to improve the design of new investments. Such as investing in several stages of the AIV value chain as this would lead to both: higher business sustainability (through vertical integration and closer business relations along the VC to decrease the several informality risks of the VC); and improved impact of specific activities (e.g. evidence showed that nutrient content of their own AIV increased when organic manure was applied, thus leading to more investments in 'Integrated Soil Fertility Management' training for their contract-farmers).

When selecting new investees for a sustainable investment, various types of screening criteria can be

⁶⁶Most economic players in Kenya, especially in rural areas, are not fully aware of the Agenda 2030 and do not refer to such development benefits as "SDGs".

helpful. An example of positive screening criteria is the explicit definition by [Kenya Climate Ventures](#) (an investor of the AIV value chain)⁶⁷ of the sectors and expected sustainability impact they want to have.⁶⁸ Similarly, the AgriFI Kenya Challenge Fund of the European Union, through calls for proposals, selects the potential recipients of funding (agri-enterprises) based on their projected economic viability and social and environmental impacts (including demonstrating how they benefit smallholder farmers).⁶⁹ A special credit line from the commercial Equity Bank (under a European Investment Bank facility linked to the AgriFI Kenya Challenge)⁷⁰ provides an example of both: negative screening criteria (activities of the applicant's business must not have any adverse environmental and social impact); and normative-based screening criteria (applicants must prove that their operations promote adoption of the 'Good Agricultural Practices' certification by the smallholder farmers they partner with).

The difficulty of identifying potential SDG-related impacts is also related to the dynamic impacts of external actors (both the overall business ecosystem and the behaviour of the other VC actors). Against this background, engaging with local multistakeholder platforms can help an investor in identifying its own potential and current SDG-related impacts. This was partly the interest generated by the "AIV multistakeholder platform", which was launched in Nakuru by the County Administration in February 2020 (to regularly bring together all AIV value chain actors, build trust, coordinate action and jointly monitor development impacts) and which AgrInvest-FS recommended to consider for other parts of Kenya, given the interesting early results.⁷¹

In the context of the pathways for enhanced investment recommended by AgrInvest-FS, relevant AIV value chain actors should identify together a 'theory of change' for their activities (i.e. their specific contributions to the SDG-impacts emerging from enhanced AIV uptake). For instance, VC actors (like a farmer's organization and a transporter) interested in participating in public procurement scheme for schools and hospitals could start by estimating and linking both the potential number of smallholder women farmers lifted out of poverty by granting them a stable market; with the loss of biodiversity in their territory due to the possible deforestation emerging from the expansion of AIV cultivated land to serve such market.

Assessing and disclosing the SDG-related impacts

Impact assessment and communication, whether done directly by the investor or outsourced, are also complicated exercises (as explained in this Guidelines document). A positive aspect of measurement of SDG impacts (combining assessment of economic, social and environmental sustainability) is that it can favour the adoption of investment projects that may not seem profitable enough in the short term, financially, but significantly improve the impact performance of the entire portfolio. For instance, while some stakeholders may have doubts about the profitability of the AIV Aggregation Centres currently under discussion in the Vihiga, Kisii, and Nyamira counties of Kenya, others, including county authorities, transporters and aggregators, are seriously considering investing in them. For this potential investors Aggregation Centres would make the overall VC more efficient (better linking current and future demand and supply), as well as generate additional SDG-related impacts that would contribute to an overall enabling business environment in the medium and long term (healthier consumers, availability of quality land and water, etc.).

⁶⁷An investment management company that invested around USD 500,000 into the AIV processor MACE Foods

⁶⁸"We invest in businesses/ business models in agribusiness, water, commercial forestry, renewable energy and waste management. Our focus is working with SMEs/ private sector companies whose growing commercial success will have a positive impact on target markets and communities in Kenya"

⁶⁹For useful details on the criteria for selection and guidelines for applicants see: <https://agrifichallengefund.org/about-the-agrifi-kenya-challenge-fund/>

⁷⁰The European Investment Bank is providing, under the above-mentioned AgriFI Kenya programme, long-term local currency financing to Equity Bank for on-lending to eligible food and agricultural sector projects.

⁷¹Rampa and Were (2021) concluded that such multistakeholder platforms would contribute to facilitating more sustainable investments in the AIV by: overseeing or proposing a package of interventions needed to improve AIV productivity, market access, value addition together with economic, social and environmental sustainability; facilitating coordination and partnerships between VC players; and improving the transparency of information and clarifying market opportunities for investors along the whole VC.

Grievances from internal and external stakeholders are also important to assess impacts, and adequate processes should be established to allow for the collection and use of this information. In the case of the AgrInvest-FS work in Kenya, the possibility of AIV platforms to provide such mechanisms to disclose and discuss among all actors the impact of respective investments was an additional reason to set-up and support a multistakeholder platform, especially in the context of the pathways for enhanced investment recommended by AgrInvest-FS.

Effective disclosure of SDG-related impacts can also promote both the interest of possible financiers and the buy-in from impacted stakeholders. It could be argued, for instance, that the SDG impact-information gathered and analysed by MACE Foods through its successful application to the Dutch Food & Business Research programme played a role in the decision to finance them by Kenya Climate Ventures, a sustainability-impact oriented investment manager.

Managing the SDG-related impacts

The AgrInvest-FS work on AIV value chain in Kenya did not offer specific insights on how to manage SDG-related impacts from an individual business perspective (e.g. on procedures for strengthening impact frameworks for investors). However, from a broader investment ecosystem (or VC) perspective, the project showed that the identification and management of the trade-offs and synergies emerging from several SDG-related impacts require dialogue and coordination among all relevant actors, including investors. For this reason, AIV multistakeholder platforms were suggested as a 'steering mechanism' not only to oversee or coordinate a 'package' of interventions facilitating more investments in the AIV value chain and its broader investment ecosystem,⁷² as well as improving its economic, social and environmental sustainability, but also to jointly discuss how to better manage impacts from investments and policies, with the objective to maximise synergies and minimise the trade-offs. In fact, such platforms could be an effective tool for individual investors to discuss with others the different options to improve SDG-related impacts of their respective investments (related to "divest, treat, increase, tolerate and transfer impacts").

Understanding, analysing and managing trade-offs within food systems is a complex and highly debated topic. Nonetheless, some methods/tools are available for investors, their business partners and other actors to collectively assess and handle the trade-offs and synergies that exist both between various sustainability objectives targeted by the same investment (or accompanying measures) and between different investments from different investors (D'Alessandro *et al.*, 2021). For instance, if not coupled with targeted accompanying sustainability interventions, investing in standards to enhance quality and safety of AIV may end up marginalizing smallholders and informal traders (typically unable to comply with standards in the short run), hence increasing poverty instead of improving market access and people's diet. To avoid such unintended negative outcomes (and benefit only the already established commercial producers), whilst minimizing trade-offs and maximizing synergies, could mean accompanying and coordinating the enforcement of standards with AIV public procurement quotas and compliance training for AIV smallholders.

In the context of the pathways for enhanced investment recommended by AgrInvest-FS, these guidelines could translate into the establishment of multi-actor platforms to help investors pursue investment strategies and impact management that integrate environmental and social objectives, thus not only mitigating exposure to risk but also expanding opportunities for their capital to generate positive financial, environmental and social returns and upscale SDG-related impacts.

⁷²Measures to improve the broader investment ecosystem for AIV that were suggested during the AgrInvest-FS AgrInvest work in Kenya include: more patient capital and reasonable interest rates from financial intermediaries; accepting as collateral also the savings of a guarantor (e.g. aggregators, CBOs, etc.), land leases, off-taker agreements or vehicles; adapting repayment schemes to AIV farming cycles; making the conditions set by DFIs or private equity investors (e.g. venture capitalists interested in AIV-related start-ups) less restrictive for agri-SMEs and rural entrepreneurs, by reducing requirements like minimum yearly turnover, minimum contribution to total eligible project costs and minimum years of audited accounts (Rampa and Were, 2021).



D. Concluding remarks and next steps

A guide is a living document that improves with usage and time. Thus, it is not expected that all expectations from all potential users are met. Conversely, discrepancies with potential new best practices, gaps with the collection of impact information and the development of new assessment tools, and its application to different contexts (as seen during the AgrInvest-FS project), among others, are all important opportunities to not only improve the guide (and serve other first-time users) but also to discuss and find better ways to design and implement activities to improve the sustainability of investments. This confirms that the AgrInvest-FS project will continue working with international and local experts to use and enhance this living document, as part of broader efforts to provide practical country-customised guidance to foster sustainable investments in agrifood systems.

Bibliography

- AfricaRice.** 2020. GEM Rice Parboiler. In: *AfricaRice*. Abidjan. Cited 5 January 2022. <https://www.africarice.org/gem-rice-parboiler>
- ANFO.** 2021. Capitalisation des acquis du warrantage d'oignon sur nantissement de stock. Association nationale des coopératives des professionnels de la filière oignon du Niger (ANFO), Provisional version, March 2021.
- Brehmer, Z.** 2017. How to Incorporate Megatrend Analysis into Your Business. Cited 17 December 2021. <https://www.euromonitor.com/article/how-to-incorporate-megatrend-analysis-business>
- CFA & PRI.** 2018. Guidance and Case Studies for ESG Integration: Equities and Fixed Income.
- CFS.** 2014. Principles for Responsible Investment in Agriculture and Food Systems.
- Cortese, M. P., Karkare, P., Seini, M. and Van Seters, J.** 2021. Étude sur la chaîne de valeur oignon au Niger. Projet AgrInvest - Systèmes alimentaires.
- COSO (Committee of Sponsoring Organizations of the Treadway Commission) and WBCSD (World Business Council for Sustainable Development).** 2018. Enterprise Risk Management. Applying enterprise risk management to environmental, social and governance-related risks.
- D'Alessandro, C. and Tondel, F.** 2021. Projet AgrInvest-systèmes alimentaires – Étude de cadrage du système alimentaire burkinabé - Facteurs clés et chaînes de valeur prometteuses pour améliorer la durabilité du système alimentaire. Rome, FAO. <https://doi.org/10.4060/cb3739fr>
- D'Alessandro, C., Bizzotto Molina, P., Dekeyser, K. & Rampa, F.** 2021. Understanding and managing trade-offs in food systems interventions: The case of Nakuru county, Kenya. Maastricht. ECDPM.
- Daré, W., Venot, J. P., Kabore, E., Tapsoba, A., Traoré, F., Gérard, F., Carboni, S., Idani, D., Kambiré, H., and Napon, K.** 2019. Grands aménagements hydroagricoles, inégalités environnementales et participation: le cas de Bagré au Burkina Faso, *Vertigo - la revue électronique en sciences de l'environnement*, vol. 19, no. 1, March 2019.
- Dedewanou, F. A., Rolande, R. C. B. & Tossou, K.** 2021. Remittances and agricultural productivity in Burkina Faso. *Applied Economic Perspectives and Policies*.
- ENTAG & Resiliencia Ethiopia.** 2021. Context Sensitive Investment Project.
- European Commission.** 2021. EU taxonomy for sustainable activities. Cited 10 November 2021. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en
- FAO.** Forthcoming. FISH4ACP. Developing Sustainable Value Chains for Aquatic Products.
- FAO.** 2021a. Guidance on core indicators for agrifood systems – Measuring the private sector's contribution to the Sustainable Development Goals. Rome. <https://doi.org/10.4060/cb6526en>
- FAO.** 2021b. The Ex-ante Carbon Balance Tool (EX-ACT). Cited 10 October 2021. https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en
- FAO.** 2018. The report on the online discussion: Youth employment in agriculture as a solid solution to ending hunger and poverty in Africa.
- FAO.** 2014. Sustainable food value chain development – Guiding principles. Rome.
- FAO.** 2011. *The State of Food and Agriculture. Women in agriculture*. Closing the gender gap for development.
- FAO & Centre de recherche sur les gaz à effet de serre agricoles de la Nouvelle-Zélande.** 2019. Soutenir un développement à basses émissions des secteurs laitiers pastoraux et agropastoraux en Afrique de l'Ouest (Bénin, Burkina-Faso, Mali, Niger & Sénégal). Rome.
- FAO & ECDPM.** 2021. Promoting sustainable investment in dairy in Ethiopia.

- FAO & New Zealand Agricultural Greenhouse Gas Research Centre.** 2017a. Supporting low emissions development in the Ethiopian dairy cattle sector – reducing enteric methane for food security and livelihoods. Rome.
- FAO & New Zealand Agricultural Greenhouse Gas Research Centre.** 2017b. Supporting low emissions development in the Kenya dairy sector – reducing enteric methane for food security and livelihoods. Rome.
- Gizachew, D., Szonyi, B., Tegegne, A., Hanson, J. & Grace, D.** 2016 Aflatoxin contamination of milk and dairy feeds in the Greater Addis Ababa milk shed, *Ethiopia. Food Control*, Vol. 59, 2016, pp. 773-779, ISSN 0956-7135, <https://doi.org/10.1016/j.foodcont.2015.06.060>.
- GSMA.** 2021. Agri DFS: Emerging business models to support the financial inclusion of smallholder farmers.
- Global Sustainable Alliance.** 2018. *Global Sustainable Investment Review*.
- Gunasekera, M. Y.** 2016. Minimization of water use in the paddy parboiling process. [DOI:10.1109/MIES.2016.7780271](https://doi.org/10.1109/MIES.2016.7780271)
- Hagerlberg, N.** 2019. Carbon offsets are not our get-out-of-jail free card. UNEPS Story-Climate Action. [online] [Cited 03 December 2021].
- Healabel.** 2021. What are onion benefits? What are onion side effects?
- IFC.** 2019. Operating Principles for Impact Management.
- ITF.** 2021. Time to deliver: mobilising private capital at scale for people and planet.
- Jenn-treyer, O. & Hassane A.** 2019. Définition d'une stratégie de subvention dans le cadre de la Facilité 1 du Fonds d'Investissement pour la Sécurité Alimentaire et Nutritionnelle (FISAN).
- KIT & Solidaridad.** 2016. Ideation of small medium enterprise (SME) services in cocoa growing communities in Ghana.
- Knaepen, H., Rampa, F., Torres, C., and Bizzotto Molina, P.** 2017. Options and opportunities to make food value chains more environmentally sustainable and resilient in sub-Saharan Africa. GEF and UNDP.
- Koutou M., D'Alessandro C., Tondel F., Cortese M. P. and Knaepen H.** 2021. Projet AgrInvest-Systèmes alimentaires - Évolutions récentes du secteur rizicole au Burkina Faso: Contraintes de développement et opportunités d'investissement privé. Rome, FAO. <https://doi.org/10.4060/cb7557fr>
- Lenti, J.** 2019. In Burkina Faso, land ownership for women is complex, but key to a more gender balanced world.
- Mamidanna S. et al.** (forthcoming). EX-ACT VC Assessment for Dairy Value Chain in Central-Eastern Oromia in Ethiopia.
- Mercer.** 2015. Investing in a Time of Climate Change.
- Ndambi, A., Pishgar Komleh H., van der Lee, J.** 2020. An overview and analysis of integral tools to monitor people, planet and profit sustainability dimensions of dairy development in East Africa. Wageningen Livestock Research, Report 1277.
- NCEA (Netherlands Commission for Environmental Assessment).** 2021. Niger. Profil EIES. Cited 13 January 2022. <https://eia.nl/fr/pays/niger/profil-eies>
- NCEA.** 2020a. Ethiopia. Profil EIES. Cited 13 January 2022. <https://eia.nl/en/countries/ethiopia>
- NCEA.** 2020b. Burkina Faso. Profil EIES. Cited 13 January 2022. <https://eia.nl/fr/pays/burkina+faso/profil-eies>
- NCEA.** 2015. Kenya. Profil EIES. Cited 13 January 2022. <https://eia.nl/en/countries/kenya/esia-profile>
- Nicolay, G. Estur, G. Walsh, C. and Desalegn, P.** 2020. Cotton Value Chain Analysis in Ethiopia. Report for the European Union, DG-DEVCO. Value Chain Analysis for Development Project (VCA4D CTR 2016/375-804).
- Niemoller, J.** 2021. What is ESG Materiality? EHS MANAGEMENT BLOG. Cited 17 December 2021. <http://www.perillon.com/blog/what-is-esg-materiality>
- Okai, E. K.** 2018. African farmers struggle to compete with cheap Chinese tilapia. The Fish Site.

- People's Bank of China.** 2021. Notice on Issuing the Green Bond Endorsed Projects Catalogue (2021 Edition). (Unofficial translation courtesy of the Climate Bonds Initiative). Cited 10 November 2021. <https://www.climatebonds.net/files/files/the-Green-Bond-Endorsed-Project-Catalogue-2021-Edition-110521.pdf>
- Rabiou, M. M., Moussa, I., Tchicama Mella M. and H. Sadou.** 2018. Panorama of Onion Production in Tillabéri, A Region of the Far West of Niger. *European Scientific Journal*, May 2018 edition, Vol.14, No.15.
- Rampa, F. and Were, O.** 2021. AgrInvest-Food Systems Project – Increasing sustainable investments in the Kenyan indigenous vegetables chain. Rome. <https://doi.org/10.4060/cb7413en>
- RECA.** 2014. Bilan des actions de transfert des technologies. Les magasins « RESEDA » pour la conservation de l'oignon. Rapport provisoire. Edited by Abdoulaye Ali Koura (RECA – CECI), Mahamadou Idi (ANFO), Aïssa Kimba (RECA), Patrick Delmas (RECA). Réseau National des Chambres d'Agriculture du Niger (RECA), Association Nationale des Coopératives des Professionnels de la Filière Oignon. May 2014.
- Richards, M. et Sander, B. O.** 2014. Alternate wetting and drying in irrigated rice: Implementation guidance for policymakers and investors. CGIAR, CCAFS and IRRI.
- Rikolto.** 2019. Sustainable rice cultivation within Rikolto: Rolling out the Sustainable Rice Platform Standard. https://assets.rikolto.org/paragraph/attachments/rikolto_sustainable_rice_cultivation_brochure_08-2019_ghana_lr.pdf
- RVO.** 2019. Report on Youth Employment in Agricultural Value-Chain: Burkina Faso Catalysts. Netherlands Enterprise Agency.
- Salman, M., Pek, E., Fereres, E. and García-Vila, M.** 2020. Policy guide to improve water productivity in small-scale agriculture - The case of Burkina Faso, Morocco and Uganda. Rome, FAO.
- Santos, N., Monzini, J., Pedersen, E. and Borgomeo, E.** 2021. The shortest path: Accelerating investment towards carbon-neutral agrifood systems. Rome, FAO. <https://doi.org/10.4060/cb7278en>
- Sawadogo, H., Traoré, O., Tiatite, N. and Toillier, A.** 2020. Cas d'innovation: rizipisciculture Rapport d'analyse de l'étude de cas WP3 – projet SERVInnov au Burkina Faso. CIRAD, Montpellier, France.
- Selten, M.** 2015. Certification and wage labour in the cocoa sector in Ghana.
- Shehadi, S.** 2016. Political unrest hits Ethiopia FDI. Violent protest could spell the end of Ethiopia's impressive upward economic trend. FDI Intelligence.
- SRP.** 2022. The SRP Assurance Scheme. The world's first and only rice sustainability management system that links buyers in global markets to rice producers who manage their land and production in a sustainable manner. Cited 20 April 2022. <https://www.sustainablerice.org/assurance-scheme/>
- Terdo, F. and Feola G.** 2016. The Vulnerability of rice value chains in Sub-Saharan Africa: a review. *Climate*, 4:47.
- Tillie, P., Louhichi, K. and Gomez-Y-Paloma, S.** 2020. Impacts of Small-Scale Irrigation in Niger: Ex-ante analysis of micro-economic effects using a farm household model, EUR 29836 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-17942-9, doi:10.2760/283, JRC121218.
- TRAIDE Ethiopia,** 2021. Investment Opportunities in the Ethiopian Dairy Sector.
- UN Environment Programme Finance Initiative (UNEP FI).** 2021a. Principles for Responsible Banking. Cited 10 November 2021. <https://www.unepfi.org/banking/bankingprinciples/>
- UNEP 2019.** Rice may be cheap, but production comes at a cost <https://www.unep.org/ru/node/24665>
- UNEP FI.** 2021b. Principles for Responsible Investments. Cited 11 November 2021. <https://www.unpri.org/about-us/what-are-the-principles-for-responsible-investment>
- UNEP FI and UN Global Compact.** 2013. Understanding the Impact of your Investments. Measuring Environmental and Social Performance.

- UNEP Inquiry.** 2015. The Financial System We Need. Aligning The Financial System with Sustainable Development
- UNEP Inquiry.** 2016. Definitions and Concepts - Background Note.
- Van Oort, P. A. J. and Zwart, S. J.** 2017. Impacts of climate change on rice production in Africa and causes of simulated yield changes. *Global Change Biology*, 24.
- Van der Lee, J., Dhugasa, D., Shirega, M., Mulugeta, T. W. et al.** 2018. The Dairy Feed Advancing Model – a Value Chain Innovation in the Ethiopian Dairy Sector. <https://edepot.wur.nl/469861>
- Woolfrey, S., Bizzotto Molina, P. and Ronceray, M.** 2021. AgrInvest-Food Systems Project – Political economy analysis of the Ethiopian food system. Key political economy factors and promising value chains to improve food system sustainability. Rome, FAO. <https://doi.org/10.4060/cb3255en>
- WUR, SNV, FCMN-Niya and Agri-Bilan.** 2012a. Oignon: Produit bradé à la récolte ou perdu en stockage. Presented at the 4th edition of the Journée nationale de l'Oignon, 6-7 June 2011, Niamey.
- WUR, SNV, FCMN-Niya and Agri-Bilan.** 2012b. L'importance de l'oignon dans la vie socio-économique du Niger: contexte et agendas d'action.

Annex 1 – Using Ext-ACT VC to assess the impact of a private and a public investment proposal

Background⁷³

Livestock production is a major source of livelihood for about 80 percent of the rural population in Ethiopia, and it contributes up to 16 percent of Ethiopia's Gross Domestic Product (FAO & New Zealand Agricultural Greenhouse Gas Research Centre, 2017a). Despite having a large dairy cattle population and a growing demand for dairy products, Ethiopia remains a net importer of these products. This in turn, means that this could be a very attractive market for investors as well as a priority sector for Government investments. In this regard, with the use of the tool EXT-ACT VC together with information from an investment proposal from a large private company (to set-up a dairy farm to produce around 250 000 litres/day) and the government plans for an agro-industrial park, an agro-commodity procurement zone,⁷⁴ and a network of rural transformation centres, the potential post-harvest impact of these investments was estimated.

Results

Some of the results of the study are that:

- Total GHG emissions (tonnes of CO₂ per year) have increased 3-fold, being the largest increase per VC stage – in decreasing order: transportation, packaging and processing.
- Although food loss levels have almost doubled (due to the increase of volumes produced), the relative levels have decreased due to several interventions (e.g. cooling facilities).
- The use of water has significantly increased, mainly due to the private investment project.
- Planned total and net income did not necessarily translate into a higher income for all VC actors (e.g. for farmers with local-breed cows and cooperatives).
- Aggregated net employment and ownership ratio is negative. Likewise, net women's participation is negative. Both impacts are linked to the reduction of farmers with local-breeds.

Discussion and lessons learnt

As mentioned in the guide, the assessment of impacts is a dynamic and challenging exercise, and the use of the EXT-act VC tool proves it. For example, many assumptions had to be made to conduct the assessment (e.g. the type of equipment to be used and the producers' productivity). From a business point of view, this was quite interesting, as the use of the tool also served to improve some business forecasts. Moreover, the assessment has clearly shown that there are many trade-offs while conducting an investment (e.g. the production increase also means an increase in total food lost, use of water, and GHG emissions).

Finally, other lessons learnt from this case are:

- It is unlikely that the use of only one tool would allow investors to capture and assess all the expected results (e.g. on-farm impacts were not considered). Thus, the use of multiple tools should be always envisioned.
- These kinds of impact results, especially the negative ones, should not only be used to criticize investors. On the contrary, they should be used proactively as a building stone to improve both the investment's design and implementation.
- Sometimes, the use of assumptions to conduct an assessment is unavoidable. When this is the case, keeping a log is very important to further improve the assessment process as well as the management strategy of the impacts caused.

⁷³For more information, see Mamidanna *et al.* (Forthcoming).

⁷⁴See [UNIDO](#) for more information about Integrated Agro-industrial parks and agro-commodity procurement zones.

Annex 2 – Tools and key concepts for the identification of impacts

Megatrend Analysis

Megatrend analysis analyses the long-term, consumer-driven trends that disrupt industries globally, with the objective of passing from reactionary business actions to actively leading them (Brehmer, 2017). Based on this study, and aiming to apply it to SDG investments, the analysis can be summarized in 5 steps:

1. **Build a framework.** Evaluate the megatrends to identify which will have the strongest impact on your investment.⁷⁵ Shortlist the ones that have both an immediate and a potential impact.
2. **Develop tangible understanding that leads to action.** Break down megatrends to develop tactical insights on who the trends attract and how they apply to your investment. For instance, biodiversity preservation might be more relevant for certain kinds of stakeholders.
3. **Quantify impact and prioritize investment.** Identify key categories, products or consumer cohorts that can serve as a proxy for quantification. Approximate the size, growth and projected impact of megatrends on your investment. Rank them and prioritize a wide set of consumer needs that will drive true value gains (e.g. end consumers willing to pay for sustainability).
4. **Evaluate your portfolio and pipeline to ensure success.** Map your current investment portfolio and innovation pipeline against the megatrend-driven needs of tomorrow. Identify gaps vs. key drivers of value gains to prioritize [innovation or impact opportunities](#).
5. **Repeat the process annually.** Although megatrends should not change annually, it is worthwhile to re-evaluate them, especially the first 4 steps as megatrend interpretations evolve year to year and new investment ideas may emerge.

SWOT analysis

ESG factors (such as the ones listed in Step 2.2, like child labour are included in the traditional SWOT analysis: strengths, weaknesses, opportunities, and threats (CFA & PRI, 2018). For a detailed explanation on how to apply it, see [Gerlach \(no date\)](#).

Dependency mappings and stakeholder engagement

This methodology aims at mapping the stakeholders who have a vested interest in the investment (e.g. end-consumers and local communities). Their interest can be either positive or negative. As a result, not only is identifying these actors important but also setting-up strategies to manage their expectations and influence. For a detailed explanation on how to apply it, see [Lopez \(2021\)](#).

ESG materiality analysis

A materiality analysis is used to determine which sustainability topics an investor should prioritize, and, consequently, what should be included in the ESG or impact disclosure reports. According to Niemoller (2021), the ESG materiality analysis is subjective as stakeholders all have different notions of what impact is material or not (i.e. the same impact can be material – or important – for one type of stakeholder but immaterial for another). Thus, an ESG materiality analysis contemplates:

- Determining which topics are important for the internal and external stakeholders.
- Considering which topics are strategically relevant and are most likely to have a societal, environmental, and/or economic impact from the investments.
- Determining which information will be disclosed to each stakeholder and understand how this information will be used.

⁷⁵For example, Reynard (2021) lists as the main ESG Megatrends: climate change, biodiversity, the future of work, social factors, privacy, and security.

AgrInvest-Food Systems Project

**Guidelines for sustainable
agricultural investments
for Burkina Faso, Ethiopia,
Kenya and Niger**

