# UNSUSTAINABLE INVESTMENT:

# INTERNATIONAL FINANCE CORPORATION'S FAILURES TO ADDRESS GHG EMISSIONS IN INDUSTRIAL LIVESTOCK OPERATIONS

**April 2025** 





#### **Acknowledgements**

Kelly McNamara (FOE U.S.) and Dr. Divya Narain, PhD have prepared this report on behalf of the Stop Financing Factory Farming (S3F) campaign. S3F gratefully acknowledges the significant contributions to this report from the following individuals: Ladd Connell, Bank Information Center, Peter Stevenson and Wendy Smith, Compassion in World Farming, Souparna Lahiri and Andrea Echeverri, Global Forest Coalition, and Merel van der Mark, Sinergia Animal. We also thank Natalia Salvático for her skillful design work















The **Stop Financing Factory Farming Campaign** works in partnership with locally affected communities and organizations to shift development finance away from industrial livestock production towards healthier, more humane and sustainable food systems. The campaign's global Steering Committee includes: the Bank Information Center, Compassion in World Farming, Friends of the Earth U.S., The Global Forest Coalition, International Accountability Project, Sinergia Animal, and World Animal Protection. The campaign has more than 30 organizational members and partners globally.

### **Table of contents**

Executive Summary: Evaluating GHG Mitigation Across IFC's investments in High-Emitting industrial Livestock Operations	
Industrial Livestock Production: A Major Contributor to the Climate Crisis and a Threat to Food Security	
Key Findings Recommendations for IFC	
Recommendations for IFC	
Introduction	
IFC Investments in Industrial Livestock Operations	
IFC Mechanisms for Addressing Clients' GHG Emissions	
IFC Investments in Industrial Livestock OperationsIFC Mechanisms for Addressing Clients' GHG EmissionsKey Sources of GHG Emissions	
Methodology	
Key Findings	
Recommendations for IFC	
Annex 1: Requirements and Recommendations Embedded in IEC's Environmental Policies	

# Executive Summary: Evaluating GHG Mitigation Across IFC's Investments in High-Emitting Industrial Livestock Operations

Our planet is facing an unprecedented multifaceted environmental crisis. It is a confluence of compounding and mutually-reinforcing challenges of climate change, biodiversity loss, pollution and resource depletion that is nothing less than existential in its scale.<sup>1</sup>

Modern agrifood systems and GHG-intensive industrial livestock operations in particular are key drivers of this "polycrisis" and vulnerable to its impacts—a combination that threatens to keep the world's collective ability to feed a global population of 10B by 2050 out of reach. As the World Bank has explained, "The narrative is clear: to protect our planet, we need to transform the way we produce and consume food."<sup>2</sup>

This report analyzes IFC investments in industrial livestock operations between March 2020 and March 2025 and assesses the extent to which the application of IFC's environmental and social policies resulted in clients quantifying, disclosing, and/or addressing GHG emissions reductions as required. The analysis reveals that despite IFC's consistent application of requirements, the adherence among industrial meat, dairy and feed clients is low, indicating IFC's support is unlikely to be resulting in GHG reductions or improving the climate resiliency of livestock operations or supply chains. This trend is especially worrying given that by July 1, 2025, 100% of IFC's investments must be aligned with the mitigation, adaptation, and food security-related goals of the Paris Agreement.

# Industrial Livestock Production: A Major Contributor to the Climate Crisis and a Threat to Food Security

Large-scale industrial livestock systems' negative impacts on climate have attracted the attention of climate scientists as well as agricultural and food system experts and government officials. While estimates of these livestock's contributions to global GHG emissions vary, a recent Harvard study finds that absolute livestock emissions must fall by ~50% by 2030 to keep the goals of the Paris Agreement within reach.<sup>3</sup> Important also, livestock production accounts for 30% of global methane emissions, which must fall 30% by 2030 to limit global warming to 1.5°C. Because methane has 86X the global warming potential of carbon dioxide

 $(CO_2)$  over a 20-year timeframe, swift and absolute reductions from the livestock sector are critically important.

Proposed solutions for addressing the food system's outsized carbon footprint include shifting public and private financial and logistical support away from animal-source foods and toward relatively low GHG-generating plant-source foods that provide comparable or better health outcomes.<sup>4</sup> Joining a chorus of world leaders, scientists, and agricultural experts, the World Bank itself has called attention to the need for a global shift away from industrial meat and dairy toward sustainable agrifood systems and noted that all countries have a role to play.<sup>5</sup>

As a standard-setter and thought leader among development finance and private sector financial institutions alike, IFC exerts significant influence in the agribusiness space, including by sending signals to global markets about what sustainable and Paris Agreement-aligned<sup>6</sup> food systems look like.

## Recent IFC Investments in Industrial Meat, Dairy and Feed Operations: Analysis

This report analyzes 38<sup>7</sup> IFC investments (totaling roughly \$2B) in industrial meat, dairy and feed corporations between 2020 and 2025. Examining IFC loan documents and publicly available client company reports, the analysis presents a quantitative evaluation of the extent to which IFC's industrial livestock clients are mitigating GHG emissions and physical climate risk in ways that align with the bank's requirements and recommendations.

These requirements and recommendations are laid out across IFC's suite of environmental policies, including IFC's <u>Performance Standards and Guidance Notes</u>, the World Bank <u>Environmental</u>, <u>Health and Safety Guidelines</u>, and IFC's <u>Practices for Sustainable Investment in Private Sector Livestock Operations</u>. In addition to these policies, IFC has <u>committed</u> to aligning 100% of its financing activities with the goals of the Paris Agreement by July 1, 2025.

#### **Key Findings**

**Key Finding #1:** A review of IFC's suite of environmental policies revealed three requirements and four recommendations with respect to GHG mitigation and adaptation:

Requirement 1.1	Quantify and report scope 1 and scope 2 <sup>35</sup> emissions if expected to be or currently more than 25,000 tonnes CO2e
Requirement 1.2	Reduce emissions intensity to lower than national average/reduce absolute emissions
Requirement 1.3	Manage physical climate risks including those within supply chains
Recommendation 1.1	Improve animal productivity to reduce emissions
Recommendation 1.2	Improve operational productivity and energy efficiency to reduce emissions
Recommendation 1.3	Reduce waste-related emissions
Recommendation 1.4	Reduce supply chain emissions

**Key Finding #2:** Our analysis of industry practices and relevant standards reveals that IFC's requirements lag behind best practices. Relevant gaps highlight opportunities for IFC to strengthen its Performance Standards during the forthcoming update to the World Bank's Environmental and Social Framework.

IFC Requirements & Recommendations	Best Practice
Requirement 1.1  Quantify and report scope 1 and scope 2 emissions if expected to be or currently more than 25,000 tonnes CO2e	Client discloses disaggregated GHG emissions (CO <sub>2</sub> , N <sub>2</sub> O, CH <sub>4</sub> ) across Scopes 1-3, including all relevant categories, e.g., purchased goods and services
Requirement 1.2  Reduce emissions intensity to lower than national average/reduce absolute emissions	Client reports 1.5°C-aligned emissions reduction strategies and measures (which may involve diminished animal-based meat or dairy production and reduction in herd sizes) across Scopes 1-3
Requirement 1.3  Manage physical climate risks including those within supply chains	Client adaptation plans cover supply chains, addressing the risk of heat stress (animals and laborers) and extreme weather events. Adaptation plans should include measures like crop (and/or product) diversification and be updated every three years or as business-interrupting disasters require.

	Adherence Level			
Requirement	High	Low	Zero/No Evidence	Best
1.1: Quantify and report Scope 1 and Scope 2 emissions if expected to be or currently more than 25,000 tonnes CO2e	26	4	8	0
1.2: Reduce emissions intensity to lower than national average/reduce absolute project-related emissions	5	9	24	0
1.3: Manage physical climate risks including those within supply chains	0	0	38	0

Client adherence to IFC requirements: additional detail

#### Requirement 1.1: GHG Emissions Disclosure

- While 68% of clients disclosed Scope 1 and 2 emissions. Reporting was inconsistent – some reported only one scope, some reported an aggregate figure for both scopes, and others reported company-level emissions when project-specific reporting was required.
- A review of loan documents and publicly available company documents revealed that zero clients followed the best practice for GHG disclosure. This involves disclosing disaggregated GHG emissions carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) across Scopes 1-3.

### Requirement 1.2: Reduce emissions intensity to lower than national average/reduce absolute project-related emissions

- A review of loan documents and publicly available company reports revealed that over 60% of projects failed to demonstrate adherence to the requirement that IFC clients reduce emissions intensity (CO2e per unit measure of product) to below national average levels.
- While one client (feed crop producer/ trader Astarta Holdings) has published a decarbonization strategy that aims to reduce absolute non-FLAG (forest, land, and agriculture) emissions (Scope 1-3) 44% by 2030, it is widely acknowledged among public and private sector actors that

agricultural companies must reduce FLAG-related emissions to keep the goals of the Paris Agreement within reach. Just one client, feed producer Olam, has committed to align its company level Scope 1–3 emissions with a 1.5°C pathway by 2030.

### Requirement 1.3: Requirement to manage physical climate risks of operations and supply chains

 A significant finding was that zero projects demonstrated adherence to the requirement to manage physical climate risks, including those within supply chains. This is a major oversight given the vulnerability of industrial livestock production to climate change.

Recommendation		Evidence of Adherence	
	Yes	No	
1.1: Improve animal productivity to reduce emissions	9	22	7 (feed producers)
1.2: Improve operational productivity and energy efficiency to reduce emissions	23	15	0
1.3: Reduce waste-related emissions	11	27	0
1.4: Reduce supply chain emissions	4	34	0

- Our analysis indicates that, with the exception of increasing animal productivity to reduce GHG emissions intensity (a measure that can involve increased animal suffering and disease/ pandemic risk), clients overwhelmingly did not adhere to IFC recommendations around improvements designed to reduce GHG emissions.
- While roughly 60% of projects complied with IFC's recommendation to reduce energy use (Scope 2), the majority (>90%) of agricultural producers' emissions occur in their supply chains (Scope 3). These encompass emissions from livestock-raising activities and feed production, inclusive of land use and land use change (LULUC), e.g., deforestation.
- Just four clients (10%) demonstrated efforts to reduce emissions in their supply chain (Scope 3). It is <u>widely accepted</u> that addressing Scope 3 emissions from agricultural operations is critical for meeting the goals of the Paris Agreement.

#### **Recommendations for IFC:**

- Stop supporting the expansion of industrial livestock production.
- a.) Instead, MDBs should facilitate the transition of GHG-intensive and otherwise environmentally destructive industrial farming systems to climate-impact mitigating and adaptive agroecological systems.
- b.) These systems should prioritize the production

- of a variety of high-nutrition crops for human consumption and integrate livestock only where such integration can deliver ecological and social benefits and effectively address—rather than exacerbate—food insecurity and gender inequalities.
- c.) Support short supply chains with a low GHG footprint, promoting regional, sub-regional, national, and sub-national trade instead of global businesses.<sup>9</sup>
- 2.) Strengthen GHG disclosure and mitigation requirements:
- a.) Strengthen mitigation requirements for all animal agriculture investments, including requirements for mandatory Scope 1-3 reporting and science-based, time-bound absolute emissions reduction targets that align with global targets
- b.) Require disaggregated reporting, with a focus on methane ( $\mathrm{CH_4}$ ). Given that methane has 86X the warming potential of  $\mathrm{CO_2}$  over a 20-year timeframe, absolute methane reductions must be prioritized among all industrial livestock operations, including those that IFC supports.
- c.) However, the need to reduce methane emissions should not lead to ruminants reared on traditional pasture or rangeland being replaced by industrial pig or poultry production, as this has many disadvantages. These include high use of antimicrobials, high risk of zoonoses and very poor standards of animal welfare. Also, these systems are dependent on using soy and cereals as animal feed. These crops are usually

- produced intensively in monocultures and with agro-chemicals. This leads to soil degradation, biodiversity loss, unsustainable freshwater consumption, the pollution of air and water, and negative impacts on the health and wellbeing of local communities.
- d.) GHG intensity reduction measures should not allow for the absolute emission increases that arise when the production of animalsource food is increased; nor should such measures suffice for adherence to relevant IFC requirements if implementation leads to other negative impacts (e.g., increased water pollution or diminished animal welfare).

#### 3.) Strengthen adaptation requirements:

- a.) "Paris-aligned" labeling should require all borrowers to demonstrate how their operations reduce the risks associated with extreme weather events—both climate's impacts on the operations, and the operations' climate-induced impacts on the environment. These include mass pollution, such as release of animal waste and effluents into local waterways due to dumping or flooding, the increased spread of disease associated with global warming, and reliance on brittle supply chains, interruptions of which can cause severe food insecurity among vulnerable populations.
- 4.) Acknowledge the need for and support critical demand-side shifts by:
- a.) Publicly recognizing scientific imperatives concerning the convergence of global diets toward reduced levels of meat and dairy consumption.
- b.) Refraining from making investments in livestock and feed operations that serve overconsuming regions including the EU, US, and parts of South America and Asia.
- c.) Supporting policies, projects and initiatives that promote more sustainable, plant-forward diets.
- 5.) With active community participation and consent, support small- and mid-scale agroecological production systems, including diversified, mixed crop and livestock systems, silvopasture, agroforestry, and managed grazing.

- a.) This may be achieved via direct finance, including advisory assistance, but also by building relationships with financial intermediaries that understand the benefits of this kind of agriculture, that support its integration with local and regional markets, and will commit to IFC Performance Standards and Guidance to reduce environmental and social risk.
- b.) Another alternative is to partner with DFIs that have more experience in this sub-sector, such as IFAD, and to explore innovative financing, such as crop insurance that incentivizes adaptive practices, and collaboration with MIGA on guarantees.



PHOTO: Shutterstock

#### Introduction

Our planet is facing an unprecedented multifaceted environmental crisis. It is a confluence of compounding and mutually-reinforcing challenges of climate change, biodiversity loss, pollution and resource depletion that is nothing less than existential in scope.<sup>11</sup>

Modern agrifood systems and GHG-intensive industrial livestock operations in particular are key drivers of this "polycrisis" and vulnerable to its impacts—a combination that threatens to keep the world's collective ability to feed a global population of 10B by 2050 out of reach. As the World Bank has explained, "The narrative is clear: to protect our planet, we need to transform the way we produce and consume food." 12

This report analyzes IFC's investments in industrial livestock operations between March 2020 and March 2025 and assesses the extent to which the application of IFC's environmental and social policies resulted in clients quantifying, disclosing, and/or addressing GHG emissions reductions as required. The analysis reveals that despite IFC's consistent application of requirements, low levels of adherence among industrial meat, dairy and feed clients indicates IFC's support is unlikely to be resulting in GHG reductions or improving the climate-resiliency of livestock operations or supply chains. This trend is especially worrying given that by July 1, 2025, all of IFC's investments must be aligned with the goals of the Paris Agreement, including GHG mitigation, adaptation, and food security.

## Industrial Animal Agriculture's Contributions to the Global Climate Crisis

As the climate crisis has intensified during the last decade, high-emitting industrial livestock operations have attracted increased attention from climate scientists, policymakers, investors, and citizens in every global region. And rightfully so. Recent estimates of animal agriculture's contributions to global GHG emissions range from 11.2% to 19.6% and dramatically increase when factoring in emissions from land conversion (including deforestation) for animal feed production and grazing.<sup>13</sup> Some studies show that livestock

alone will comprise roughly half of the total global 1.5°C emissions budget by 2030 and 80% by 2050.14

According to a 2024 Harvard study, absolute global livestock emissions must fall by roughly 50% by 2030 to keep the goals of the Paris Agreement, including preserving food security for a growing population, within reach.<sup>15</sup>

Proposed solutions to this element of the climate crisis include preference in climate and agricultural policies for "best available foods", defined as relatively low GHG-generating plant-sourced foods that provide comparable or better health outcomes than animal-based foods. <sup>16</sup> Joining a chorus of world leaders, scientists, and agricultural experts, the World Bank has also called attention to the need for a global shift away from industrial meat and dairy toward sustainable agrifood systems, noting that all countries have a role to play. <sup>17</sup>

According to the World Bank's 2024 "Recipe for a Livable Planet", high-income countries (HICs) can and should take the lead on ending the harmful production and consumption patterns, including by decreasing consumption of animalsource foods and providing increased financial and technical support to middle and low-income countries to adopt sustainable agricultural practices and technologies. Middle income countries (MICs), where the majority of GHG emissions are occurring, should also decrease consumption of unsustainably produced animal-source foods and reduce land conversion. Clearing land for monoculture feed production and grazing is a leading cause of <u>deforestation</u> and <u>biodiversity loss</u>. Low-income countries (LICs) should "focus on green and competitive growth" and "avoid building the high-emissions infrastructure that highincome countries must now replace." Additional recommendations for LICs include expanding agricultural practices such as agroforestry, which, in addition to delivering environmental sustainability and resiliency benefits could improve productivity in addition to providing job opportunities and supporting access to healthy, diversified diets.<sup>18</sup>

An estimated three quarters of the world's animalsource foods are produced in large-scale industrial or "factory farm" settings.<sup>19</sup> And industrial meat, dairy, and animal feed producers have no plans to slow their growth.<sup>20</sup> On the contrary, global agribusiness conglomerates are <u>directly</u> and

indirectly (via capital markets) fueling expansion in emerging economies, often with the support of IFC and other multilateral development finance institutions.<sup>21</sup>

As a standard-setter and thought leader among development finance and private sector financial institutions alike, IFC exerts significant influence in the agribusiness space, including by sending signals to global markets about what sustainable and Paris Agreement-aligned<sup>22</sup> food systems look like. To the extent IFC's investments do not involve sufficient impact mitigation or elimination, they instead support the continued expansion of "business as usual" operations that the World Bank itself, together with climate and other environmental experts, have strongly cautioned against. Food insecurity is a major challenge in developing markets and one that is likely to intensify as populations increase, global temperatures continue to rise, and natural resources continue to diminish. For this reason, it is imperative to understand the extent to which IFC investments in industrial animal agriculture's global expansion is or can be aligned with the absolute GHG reduction and food security goals of the Paris Agreement.

### IFC Investments in Industrial Livestock Operations

IFC is the largest global development finance institution focused on the private sector in developing countries. Between March 2020 and March 2025, IFC pumped roughly \$1.95B into the expansion of industrial meat, dairy and feed corporations.

Explaining its support for industrial livestock producers, IFC has noted, "Meat and dairy products are...important in terms of helping people to meet their nutritional needs, especially in developing countries. Micronutrient deficiencies, including iron and zinc, affect more than 2 billion people worldwide, and meat and dairy products are rich sources of these essential nutrients."23 While meat and dairy can provide a number of micronutrients, it is unclear whether increasing the production levels of large-scale, industrialized meat and dairy operations that market their products via major food retailers, QSRs, and export channels is an effective, let alone the best, way to address micronutrient deficiencies among vulnerable populations. Determining this would require robust assessments of the diversity of nutritional needs among divergent communities and the extent to which increasing industrial production of meat or dairy could address them.

Research from the Ecuadorian environmental group CEDENMA highlights the devastating impacts of industrial meat and dairy expansion on communities' ability to produce food and preserve local industries, including eco-tourism. Also important, industrial livestock production involves unsustainable impacts on climate and biodiversity and social impacts, including antimicrobial resistance (AMR) and the risk of zoonotic pandemics, any/all of which have negative impacts on human health and exacerbate food insecurity. Contributing to this degradation and diminished productivity are industrial models of meat and dairy production. Prioritizing profits over people and planet, these vertically integrated conglomerates have driven over-consumption and overproduction, while food waste levels have risen 30%. "There is no global food shortage because we produce more than enough food to feed everyone in the world," reports the World Food Programme (WFP). Again, addressing food and nutrition insecurity requires conducting thorough needs assessments and grappling with what sustainable methods of production and distribution will effectively address those needs.

The question or whether or to what extent IFC conducts any such needs assessments is beyond the scope of this analysis. Rather, here we are concerned with the extent to which IFC's investments in industrial livestock operations are aligned with the goals of the Paris Agreement, including preserving food security. On a global basis, climate change has already diminished agricultural productivity by 20%. This means it is imperative that IFC's investments in the highest-emitting agricultural subsector (livestock) involve GHG mitigation.

### IFC Mechanisms for Addressing Clients' GHG Emissions

To address the externalities of the projects it funds, IFC has put in place a suite of environmental policies encompassing requirements and recommendations on environmental impact mitigation for investee clients. These include IFC's Performance

Standards and Guidance Notes, the World Bank
Environmental, Health and Safety Guidelines,

and IFC's <u>Practices for Sustainable Investment</u> in <u>Private Sector Livestock Operations</u>. <sup>24</sup> IFC has also <u>committed</u> to aligning 100% of its activities, strategies, and investments with the goals of the Paris Agreement by July 1, 2025. Such alignment should exclude investments in high-emitting corporations the expansion of which either (a) is incompatible with the goals of the Agreement or (b) contributes to carbon lock-in.

Included among IFC's suite of environmental policies, requirements and recommendations are requirements that the bank's agribusiness and other clients mitigate impacts and risks related to GHG emissions and climate change. Whether clients can sustainably deliver on outcomes depends at least in part on the extent to which they adhere to and/or adopt IFC's relevant requirements and recommendations. In other words, client adherence is an indicator of the extent to which IFC's investments in private sector livestock operations are, in fact, as "sustainable" as IFC's policies suggest.<sup>25</sup>

This analysis focuses on 38<sup>26</sup> industrial animal agriculture projects funded between 2020 and 2025 and presents a quantitative evaluation of the extent to which IFC's industrial livestock clients adhere to the bank's requirements, recommendations and guidance concerning mitigating GHG emissions and physical climate risk. Evidence of each investee client's high, low, or zero adherence to relevant requirements and recommendations is drawn from the Summary of Investment Information (SII) and Environmental and Social Review (ESRS) for each investment as well as clients' publicly available reports.

The analysis also examines whether all the applicable standards and policies have been applied to the projects and highlights any unwarranted exclusions. In addition, the analysis flags gaps between IFC's requirements and best industry practices, identifying areas for improvement of the bank's Performance Standards and complementary frameworks.

In late 2024, World Bank President Ajay Banga announced IFC's plan to double its annual agribusiness investments to \$9B by 2030.<sup>27</sup> This makes an assessment of the extent to which the bank's environmental policies are mitigating or eliminating environmental harms that much more timely and important.

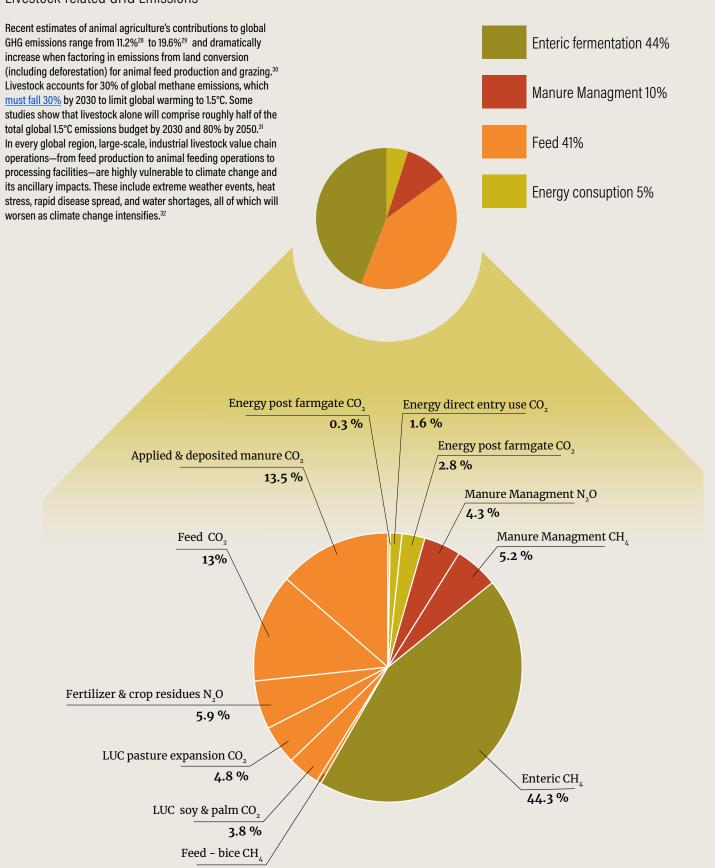


11

PHOTO: WAM

#### **Key Sources of GHG Emissions**

#### Livestock-related GHG Emissions



Own elaboration based on\_Source: UN Food and Agriculture Organization, 2017 (2010 data)

UNSUSTAINABLE INVESTMENT 12

0.5 %

### Methodology

Step 1: Extracting Requirements, Recommendations, and Guidance from IFC's Environmental Policies

Source Document	Purpose	Relevant Content for Analysis
IFC Performance Standards and Guidance Notes	Define client responsibilities for managing environmental and social risks and impacts.	Performance Standards are mandatory for clients; Guidance Notes elaborate on requirements and provide good practice examples.
IFC Practices for Sustainable Investment in Private Sector Livestock Operations	Builds upon the Performance Standards to articulate sector- specific sustainability practices.	Includes expectations related to GHG emissions and biodiversity. Clients are expected to align within three years.
World Bank Environmental, Health, and Safety (EHS) Guidelines	Provide technical reference points for Good International Industry Practice (GIIP).	Serve as benchmarks for environmental and safety performance in various sectors, including agriculture.

Step 2: Classifying and Scoping Environmental Provisions

Component	Description		
Classification Criteria	Environmental provisions were classified as either:		
	- Requirements – what clients must do, based on enforceable language		
	- Recommendations – what clients should do, based on advisory language		
Exclusions	Procedural "how-to" guidance was excluded. Only outcome- or action-oriented provisions were included.		
Precedence Across Documents	Where the same provision appeared in multiple documents, the version from the <b>IFC Performance Standards</b> was given precedence due to its greater enforceability.		
Scope of Analysis	The analysis focused exclusively on <b>environmental</b> provisions. Provisions related to health, safety, social, and community issues were excluded.		
Thematic Areas Covered	Environmental provisions related to:     Greenhouse gas (GHG) emissions     Impact measurement and reporting     Impact and risk management		
Reference	See <b>Appendix 1</b> for the full list of extracted requirements, recommendations, and guidance provisions.		

Step 3: Assessing Projects Against IFC's Environmental Requirements and Recommendations

Component	Description
Scope	38 IFC-funded industrial livestock value chain projects (March 2020 – March 2025), including direct lending, intermediated financing, general corporate finance, and advisory services.
Assessment of Client Adherence	<ul> <li>Requirements: For each requirement from Step 1, projects were rated high, low, zero/no evidence, or N/A based on specific adherence criteria and best practice benchmarks.</li> <li>Recommendations: Adherence was assessed using a Yes/No binary indicator.</li> </ul>
Sources of Evidence	<ul> <li>Primary: Environmental and Social Review Summaries (ESRS), including Environmental and Social Action Plans (ESAPs) where available.</li> <li>Secondary: Publicly available company documents used when ESRS/ESAPs lacked relevant data.</li> </ul>



PH0T0: Shutterstock

#### **Key Findings**

This section summarizes GHG emissions and climate-related requirements and recommendations and articulates the extent to which the 38 IFC projects reviewed for this analysis demonstrated adherence to each. Additional information regarding requirements, recommendations, and adherence assessments may be found in Annex 1.

Key Finding #1: A review of IFC's suite of environmental policies revealed three requirements and four recommendations with respect to GHG mitigation and adaptation:

Requirement 1.1	Quantify and report scope 1 and scope 2 <sup>36</sup> emissions if expected to be or currently more than 25,000 tonnes CO2e
Requirement 1.2	Reduce emissions intensity to lower than national average/reduce absolute emissions
Requirement 1.3	Manage physical climate risks including those within supply chains
Recommendation 1.1	Improve animal productivity to reduce emissions
Recommendation 1.2	Improve operational productivity and energy efficiency to reduce emissions
Recommendation 1.3	Reduce waste-related emissions
Recommendation 1.4	Reduce supply chain emissions

Key Finding #2: Our analysis of industry practices and relevant standards reveals that IFC's requirements lag behind best practices. Relevant gaps highlight opportunities for IFC to strengthen its Performance Standards during the forthcoming update to the World Bank's Environmental and Social Framework.

IFC Requirements & Recommendations	Best Practice
Requirement 1.1  Quantify and report scope 1 and scope 2 emissions if expected to be or currently more than 25,000 tonnes CO2e	Client discloses disaggregated GHG emissions (CO <sub>2</sub> , N <sub>2</sub> O, CH <sub>4</sub> ) across Scopes 1-3, including all relevant categories, e.g., purchased goods and services
Requirement 1.2  Reduce emissions intensity to lower than national average/reduce absolute emissions	Client reports 1.5°C-aligned emissions reduction strategies and measures (which may involve diminished animal-based meat or dairy production and reduction in herd sizes) across Scopes 1-3
Requirement 1.3  Manage physical climate risks including those within supply chains	Client adaptation plans cover supply chains, addressing the risk of heat stress (animals and laborers) and extreme weather events. Adaptation plans should include measures like crop (and/or product) diversification and be updated every three years or as business-interrupting disasters require.

	Adherence Level			
Requirement	High	Low	Zero/No Evidence	Best
1.1: Quantify and report Scope 1 and Scope 2 emissions if expected to be or currently more than 25,000 tonnes CO2e	26	4	8	0
1.2: Reduce emissions intensity to lower than national average/reduce absolute project-related emissions	5	9	24	0
1.3: Manage physical climate risks including those within supply chains	0	0	38	0

#### Client adherence to IFC requirements: additional detail

#### Requirement 1.1: GHG Emissions Disclosure

- While 68% of clients disclosed Scope 1 and 2 emissions, reporting was inconsistent.
   Some projects reported only one scope, and others reported company-level emissions when project-specific reporting was required. 21% of clients failed to disclose Scope 1 and 2 emissions at all.
- A review of loan documents and publicly available company documents revealed that zero clients followed the best practice for GHG disclosure. This involves disclosing disaggregated GHG emissions carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) across Scopes 1-3.

### Requirement 1.2: Reduce emissions intensity to lower than national average/reduce absolute project-related emissions

- A review of loan documents and publicly available company reports revealed that over 60% of projects failed to demonstrate adherence to the requirement that IFC clients reduce emissions intensity (CO2e per unit measure of product) to below national average levels.
- While one client (feed crop producer/ trader Astarta Holdings) has published a decarbonization strategy that aims to reduce absolute non-FLAG (forest, land, and agriculture) emissions (Scope 1-3) 44% by 2030, it is widely acknowledged

among public and private sector actors that agricultural companies must reduce FLAG-related emissions to keep the goals of the Paris Agreement within reach. Just one client, feed producer Olam, has committed to align its company level Scope 1–3 emissions with a 1.5°C pathway by 2030.

### Requirement 1.3: Requirement to manage physical climate risks of operations and supply chains

 A significant finding was that zero projects demonstrated adherence to the requirement to manage physical climate risks, including those within supply chains. This is a major oversight given the vulnerability of industrial livestock production to climate change.

Recommendation		Evidence of Adherence	
	Yes	No	
1.1: Improve animal productivity to reduce emissions	9	22	7 (feed producers)
1.2: Improve operational productivity and energy efficiency to reduce emissions	23	15	0
1.3: Reduce waste-related emissions	11	27	0
1.4: Reduce supply chain emissions	4	34	0

- Our analysis indicates that, with the exception of increasing animal productivity to reduce GHG emissions intensity (a measure that can involve increased animal suffering and disease/ pandemic risk), clients overwhelmingly did not adhere to IFC recommendations around improvements designed to reduce GHG emissions.
- While roughly 60% of projects complied with IFC's recommendation to reduce energy use (Scope 2), the majority (>90%) of agricultural producers' emissions occur in their supply chains (Scope 3). These encompass emissions from livestock-raising activities and feed production, inclusive of land use and land use change (LULUC), e.g., deforestation.
- Just four clients (10%) demonstrated efforts to reduce emissions in their supply chain (Scope 3). It is widely accepted that addressing Scope 3 emissions from agricultural operations is critical for meeting the goals of the Paris Agreement.

#### **Recommendations for IFC:**

### 1.) Stop supporting the expansion of industrial livestock production.

- a.) Instead, MDBs should facilitate the transition of GHG-intensive and otherwise environmentally destructive industrial farming systems to climate-impact mitigating and adaptive agroecological systems.
- b.) These systems should prioritize the production of a variety of high-nutrition crops for human consumption and integrate livestock only where such integration can deliver ecological and social benefits and effectively address—rather than exacerbate—food insecurity and gender inequalities.
- c.) Support short supply chains with a low GHG footprint, promoting regional, sub-regional, national, and sub-national trade instead of global businesses.<sup>33</sup>

### 2.) Strengthen GHG disclosure and mitigation requirements:

- a.) Strengthen mitigation requirements for all animal agriculture investments, including requirements for mandatory Scope 1-3 reporting and science-based, time-bound absolute emissions reduction targets that align with global targets.
- b.) Require disaggregated reporting, with a focus on methane (CH<sub>2</sub>). Given that methane has <u>86X</u>

- the warming potential of CO<sub>2</sub> over a 20-year timeframe, absolute methane reductions must be prioritized among all industrial livestock operations, including those IFC supports.
- c.) However, the need to reduce methane emissions should not lead to ruminants reared on traditional pasture or rangeland being replaced by industrial pig and poultry production, as this has many disadvantages. These include high use of antimicrobials, high risk of zoonoses and very poor standards of animal welfare. Also, these systems are dependent on using soy and cereals as animal feed. These crops are usually produced intensively in monocultures and with agro-chemicals. This leads to soil degradation, biodiversity loss, unsustainable freshwater consumption, the pollution of air and water, and negative impacts on the health and wellbeing of local communities.
- d.) GHG intensity reduction measures should not allow for the absolute emission increases that arise when the production of animalsource food is increased; nor should such measures suffice for adherence to relevant IFC requirements if implementation leads to other negative impacts (e.g., increased water pollution or diminished animal welfare).

### 3.) Strengthen adaptation requirements :

a.) "Paris-aligned" labeling should require all borrowers to demonstrate how their operations reduce the risks associated with extreme weather events—both climate's impacts on the operations, and the operations' climate—induced impacts on the environment.<sup>34</sup> These include mass pollution, such as release of animal waste and effluents into local waterways due to dumping or flooding, the increased spread of disease associated with global warming, and reliance on brittle supply chains, interruptions of which can cause severe food insecurity among vulnerable populations.

# 4.) Acknowledge the need for and support critical demand-side shifts by:

a.) Publicly recognizing scientific imperatives concerning the convergence of global diets toward reduced levels of meat and dairy

- consumption.
- b.) Refraining from making investments in livestock and feed operations that serve overconsuming regions including the EU, US, and parts of South America and Asia.
- c.) Supporting policies, projects and initiatives that promote more sustainable, plant-forward diets.
- 5.) With active community participation and consent, support small- and mid-scale agroecological production systems, including diversified, mixed crop and livestock systems, silvopasture, agroforestry, and managed grazing.
- a.) This may be achieved via direct finance, including advisory assistance, but also by building relationships with financial intermediaries that understand the benefits of this kind of agriculture, that support its integration with local and regional markets, and will commit to IFC Performance Standards and Guidance to reduce environmental and social risk
- b.) Another alternative is to partner with DFIs that have more experience in this sub-sector, such as IFAD, and to explore innovative financing, such as crop insurance that incentivizes adaptive practices, and collaboration with MIGA on guarantees.

Given the climate-related harms, risks, and opportunities tied to MDBs' agricultural investments, we are calling on the banks to acknowledge the urgent need for a global transition away from industrial livestock production and toward sustainable food systems and to align their strategies, investments, and activities with a livable future.

18



# Annex 1: Requirements and Recommendations Embedded in IFC's Environmental Policies

### GHG emissions: Requirements and recommendations

Requirement 1.1: Quantify and report Scope 1 and Scope 2 emissions if expected to be or currently more than 25,000 tonnes CO2e

"For projects that are expected to or currently produce more than 25,000 tonnes of CO2-equivalent annually, the client will quantify direct emissions from the facilities owned or controlled within the physical project boundary, as well as indirect emissions associated with the off-site production of energy used by the project." – PS3 para 8

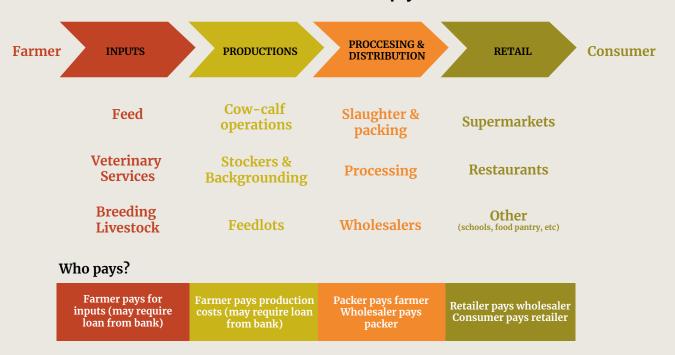
**Zero Adherence:** Client has reported no GHG emissions.

Low Adherence: Client has quantified and reported only Scope 1 or Scope 2 emissions (if they are above the reporting requirement threshold of more than 25,000 tonnes CO2e) as evidenced by either or both of IFC loan disclosures and publicly available company documents, or has quantified and reported unspecified emissions.

**High Adherence:** Client has quantified and reported both Scope 1 and Scope 2 emissions (if they are above the reporting requirement threshold of more than 25,000 tonnes CO2e) as evidenced by either or both of IFC loan disclosures and publicly available company documents.

**Best Practice:** Client discloses disaggregated GHG emissions ( $CO_2$ ,  $N_2O$ ,  $CH_4$ ) across Scopes 1–3 (if they are above the reporting requirement threshold of more than 25,000 tonnes CO2e), including purchased goods and services (as evidenced by either or both of IFC loan disclosures and publicly available company documents).

#### Flow Chart of the Beef Suply Chain



Own elaboration based on source: https://www.kansascityfed.org/agriculture/ag-outlooks/COVID-19-US-Meat-Supply-Chain/

#### Requirement 1.2: Reduce emissions intensity to lower than national average/reduce absolute project-related emissions

"Credibly demonstrate reduced GHG emissions per unit of output and a lower intensity than the national average for GHG emissions per unit of output during the course of IFC investment." – SI Practices

"The client will consider alternatives and implement technically and financially feasible and cost-effective options to reduce project-related GHG emissions during the design and operation of the project." – **PS3 para 7** 

**Zero Adherence:** Client does not report on existing or planned absolute emissions reduction measures, emissions intensity reduction measures, or benchmarking against any relevant national averages.

Low Adherence: Client reports on existing or planned absolute emissions reduction measures, and/or emissions intensity reduction measures but does not disclose realized or targeted reduction figures or benchmarking against relevant national averages.

**High Adherence:** Client reports on existing or planned absolute emissions reduction measures and/or emissions intensity reduction strategies as well as realized or targeted reduction in quantitative terms.

**Best Practice:** Client reports 1.5°C-aligned emissions reduction strategies and measures (which may involve diminished animal-based meat or dairy production and reduction in herd sizes) across Scopes 1-3.

### Requirement 1.3: Manage physical climate risks including those within supply chains

"The risks and impacts identification process will consider the emissions of greenhouse gases, the relevant risks associated with a changing climate and the adaptation opportunities" — **PS1 para 7** 

"Continuously review supply chains and where possible work with feed suppliers, so that they also focus on improving efficiency, avoiding deforestation and land-use change, addressing physical climate risks, and lowering the GHG intensity of their operations." – **SI Practices** 

"Plan for adaptation to physical climate change

risks (climate variability, droughts, heatwaves, floods and fires)." – **SI Practices** 

**Zero Adherence:** No provisions for assessment or adaptation to physical climate risks have been reported.

**Low Adherence:** Client reports plans for assessment of physical climate risks including those within the supply chain.

**High Adherence:** Client reports plans for assessment of as well as adaptation to physical climate risks including those within the supply chain.

Best Practice: Client adaptation plans cover supply chains, addressing the risk of heat stress (animals and laborers) and extreme weather events. Adaptation plans should include measures like crop (and/or product) diversification and be updated every three years or as business-interrupting disasters require.

#### Recommendation 1.1: Improve animal productivity to reduce emissions

"To achieve our Paris Agreement alignment commitment, IFC expects its investee companies to lower GHG intensity and adopt climate resilience practices:

 Improve productivity and fertility of livestock where possible or feasible and modify livestock diets to reduce methane production, N<sub>2</sub>O and GHG emissions." – SI Practices

### Recommendation 1.2: Improve operational productivity and energy efficiency to reduce emissions

"The client will implement technically and financially feasible and cost-effective measures for improving efficiency in its consumption of energy."

#### – PS3 para 6

"To achieve our Paris Agreement alignment commitment, IFC expects its investee companies to lower GHG intensity and adopt climate resilience practices:

- Adopt innovative technologies and interventions to improve the efficiency of their operations.
- Where feasible, make investments to conserve energy and water and adopt renewable energy solutions.

 "Reduce feed losses in their operations, as well as food losses across their supply chain, where possible or feasible." – SI Practices

#### Recommendation 1.3: Reduce waste-related emissions

"Manage waste appropriately and seek to reduce its climate impact." – **SI Practices** 

#### Recommendation 1.4: Reduce supply chain emissions

"Continuously review supply chains and where possible work with feed suppliers, so that they also focus on improving efficiency, avoiding deforestation and land-use change, addressing physical climate risks, and lowering the GHG intensity of their operations." – SI Practices



#### **Final notes**

- 1- Stockholm Resilience Centre. (2023). Planetary Boundaries. https://www.stockholmresilience.org/research/planetary-boundaries.html.
- 2- Sutton, W., Lotcsch, A., and Prasaan, A. (2024). Recipe for a Livable Planet: Achieving Net Zero Emissions in the Agrifood System. World Bank. <a href="https://openknowledge.worldbank.org/server/api/core/bitstreams/fef52dd8-f058-4cdc-a940-eddd9ccaeec2/content.">https://openknowledge.worldbank.org/server/api/core/bitstreams/fef52dd8-f058-4cdc-a940-eddd9ccaeec2/content.</a>
- 3- Harwatt, et al. (2024). Options for a Paris Compliant Livestock Sector. <a href="https://animal.law.harvard.edu/wp-content/uploads/Paris-compliant-livestock-report.pdf">https://animal.law.harvard.edu/wp-content/uploads/Paris-compliant-livestock-report.pdf</a>.
- 4- Ibid..
- 5- Sutton, William, et al. (2024). Recipe for a Livable Planet. https://openknowledge.worldbank.org/entities/publication/406c71a3-c13f-49cd-8f3f-a071715858fb.
- 6- International Finance Corporation, "Paris Alignment at IFC," https://www.ifc.org/en/what-we-do/sector-expertise/climate-business/paris-alignment-at-ifc.
- 7- Of the 38 projects, 32 were investments in beef, pig, poultry, or dairy producers, and 6 were investments in animal feed crop producers/traders. With respect to a 2023 investment in Friesland Campina (Pakistan) and a 2024 equity (IPO) investment in Boxer Stores (South Africa): documents disclosed via the IFC's Project Information & Data Portal included no information regarding the application of any environmental or social requirements or, therefore, any adherence to the requirements identified in this report. Where either of the company's publicly disclosed documents indicated indirect adherence to the requirements (e.g., GHG emissions disclosures and/or mitigation or adaptation measures), that information is reflected in the analysis.
- 8- The "Practices" lay out seven fundamental practices (derived from and aligned with the Bank's broader suite of environmental and social safeguards) that inform IFC investments in livestock and aquaculture projects.
- 9- The IFC should avoid investing in projects that promote global supply chains in the livestock sector, which often cause the impact of the sector as a whole to increase considerably in terms of GHG emissions. Examples of such investments are: Samuda Food Products Ltd. (nr. 48407), Sama Al Manar Tiryaki Iraq (nr. 46252), Olam WC Loan (nr. 46759), and Cofco Noble II (nr. 37939).
- 10-Godde, et al. (2021). Impacts of climate change on the livestock food supply chain; a review of the evidence. Global Food Security. <a href="https://pmc.ncbi.nlm.nih.gov/articles/PMC7938222/">https://pmc.ncbi.nlm.nih.gov/articles/PMC7938222/</a>.
- 11- Stockholm Resilience Centre. (2023). Planetary Boundaries. https://www.stockholmresilience.org/research/planetary-boundaries.html.
- 12- Sutton, W., Lotcsch, A., and Prasaan, A. (2024). Recipe for a Livable Planet: Achieving Net Zero Emissions in the Agrifood System. World Bank. <a href="https://openknowledge.worldbank.org/server/api/core/bitstreams/fef52dd8-f058-4cdc-a940-eddd9ccaeec2/content.">https://openknowledge.worldbank.org/server/api/core/bitstreams/fef52dd8-f058-4cdc-a940-eddd9ccaeec2/content.</a>
- 13- Excerpted from Friends of the Earth US. (2024). Bull in the Climate Shop: Industrial livestock financing sabotages US banks' climate commitments. <a href="https://foe.org/wp-content/uploads/2024/04/Bull-in-the-Climate-Shop\_FR\_FINAL.pdf">https://foe.org/wp-content/uploads/2024/04/Bull-in-the-Climate-Shop\_FR\_FINAL.pdf</a>; FAO. (2022). GLEAM 3 Dashboard. In: Shiny Apps. <a href="https://foodandagricultureorganization.shin-yapps.io/GLEAMV3\_Public; Xu, X., et al. (2021).">https://foodandagricultureorganization.shin-yapps.io/GLEAMV3\_Public; Xu, X., et al. (2021).</a> Global greenhouse gas emissions from animal-based foods are twice those of plant-based foods. <a href="https://doi.org/10.1038/s43016-021-00358-x">https://doi.org/10.1038/s43016-021-00358-x</a>.
- 14- Hayek, M.N., & Miller, S.M. (2021). Underestimates of methane from intensively raised animals could undermine goals of sustainable development. https://doi.org/10.1088/1748-9326/ac02ef.
- 15- Harwatt, et al. (2024). Options for a Paris Compliant Livestock Sector. <a href="https://animal.law.harvard.edu/wp-content/uploads/Paris-compliant-livestock-report.pdf">https://animal.law.harvard.edu/wp-content/uploads/Paris-compliant-livestock-report.pdf</a>.

  16 Ibid..
- 17 Sutton, William, et al. (2024). Recipe for a Livable Planet. https://openknowledge.worldbank.org/entities/publication/406c71a3-c13f-49cd-8f3f-a071715858fb.
- 18- Sutton, William, et al. (2024). Recipe for a Livable Planet. https://openknowledge.worldbank.org/entities/publication/406c71a3-c13f-49cd-8f3f-a071715858fb.
- 19-Our World in Data, "How many animals are factory-farmed?", November 2023, <a href="https://ourworldindata.org/how-many-animals-are-factory-farmed#::text=lt%20">https://ourworldindata.org/how-many-animals-are-factory-farmed#::text=lt%20</a> makes%20its%20data%20and,were%20factory%2Dfarmed%20in%202022.&text=That%20was%20just%20over%2010,than%20the%20global%20human%20population; IPES Food. (2022). The Politics of Protein. <a href="https://www.ipes-food.org/">https://www.ipes-food.org/</a> img/upload/files/PoliticsOfProtein.pdf.
- 20- Sentience Institute (based on FAOSTAT data). (2019). Global Farmed & Factory Farmed Animals Estimates. <a href="https://www.sentienceinstitute.org/global-animal-far-ming-estimates">https://www.sentienceinstitute.org/global-animal-far-ming-estimates</a>.
- 21-Stop Financing Factory Farming. (2024). Development Finance Support for Animal Agriculture. https://stopfinancingfactoryfarming.com/resources/white-paper/.
- 22- International Finance Corporation, "Paris Alignment at IFC," https://www.ifc.org/en/what-we-do/sector-expertise/climate-business/paris-alignment-at-ifc.
- 23- International Finance Corporation. (2022). IFC Practices for Sustainable Investment in Private Sector Livestock Operations. <a href="https://www.ifc.org/content/dam/ifc/do-clink/2023/IFC-practices-for-sustainable-investment-in-private-sector-livestock-operations.pdf">https://www.ifc.org/content/dam/ifc/do-clink/2023/IFC-practices-for-sustainable-investment-in-private-sector-livestock-operations.pdf</a>.
- 24- The "Practices" lay out seven fundamental practices (derived from and aligned with the Bank's broader suite of environmental and social safeguards) that inform IFC investments in livestock and aquaculture projects.
- 25- International Finance Corporation. (2022). IFC Practices for Sustainable Investment in Private Sector Livestock Operations. <a href="https://www.ifc.org/content/dam/ifc/do-clink/2023/IFC-practices-for-sustainable-investment-in-private-sector-livestock-operations.pdf">https://www.ifc.org/content/dam/ifc/do-clink/2023/IFC-practices-for-sustainable-investment-in-private-sector-livestock-operations.pdf</a>.
- 26-Of the 38 projects, 32 were investments in beef, pig, poultry, or dairy producers, and 6 were investments in animal feed crop producers/traders. Loan documents for a 2023 investment in Friesland Campina (Pakistan) and a 2024 equity (IPO) investment in Boxer Stores (South AFrica) included no information regarding the application of any environmental or social requirements. The lack of disclosure is denoted by N/A in the detailed analysis contained in the Key Findings sections of this report.
- 27-Press Release: World Bank Group. (2024). World Bank Group Announces Strategic Pivot in Agribusiness, Doubles Financial Commitment. <a href="https://www.worldbank.org/en/news/press-release/2024/10/23/world-bank-group-announces-strategic-pivot-in-agribusiness-doubles-financial-commitment">https://www.worldbank.org/en/news/press-release/2024/10/23/world-bank-group-announces-strategic-pivot-in-agribusiness-doubles-financial-commitment</a>.
- 28-FAO. (2022). GLEAM 3 Dashboard. In: Shiny Apps. https://foodandagricultureorganization.shinyapps.io/GLEAMV3 Public.

- 29- Xu, X., Sharma, P., Shu, S., Lin, T.S., Ciais, P., Tubiello, F.N., Smith, P., Campbell, N., & Jain, A.K. (2021). Global greenhouse gas emissions from animal-based foods are twice those of plant-based foods. Nature Food, 2, 724-732. https://doi.org/10.1038/s43016-021-00358-x.
- 30- Hayek, M.N., & Miller, S.M. (2021). Underestimates of methane from intensively raised animals could undermine goals of sustainable development. Environmental Research Letters, 16(6), 063006. https://doi.org/10.1088/1748-9326/ac02ef.
- 31- Harwatt, H. (2019). Including animal to plant protein shifts in climate change mitigation policy: a proposed three-step strategy. Climate Policy, 19(5), 533-541. https://doi.org/10.1080/14693062.2018.1528965.
- 32-Friends of the Earth US. (2023). Climate Misalignment: How Development Bank Investments in Industrial Livestock Are at Odds With Their Paris Agreement Commitments. https://foe.org/wp-content/uploads/2023/06/SFFF\_ClimateMisalignment\_final.pdf.
- 33- The IFC should avoid investing in projects that promote global supply chains in the livestock sector, which often cause the impact of the sector as a whole to increase considerably in terms of GHG emissions. Examples of such investments are: Samuda Food Products Ltd. (nr. 48407), Sama Al Manar Tiryaki Iraq (nr. 46252), Olam WC Loan (nr. 46759), and Cofco Noble II (nr. 37939).
- 34- Godde, et al. (2021). Impacts of climate change on the livestock food supply chain; a review of the evidence. Global Food Security. <a href="https://pmc.ncbi.nlm.nih.gov/articles/PMC7938222/">https://pmc.ncbi.nlm.nih.gov/articles/PMC7938222/</a>.
- 35- Scope 1 emissions refer to the direct emissions from sources owned and controlled by the project. Scope 2 emissions refer to emissions from the purchased energy used by the project (in the form of electricity or fuel). Scope 3 emissions refer to the emissions in the supply chain (both upstream and downstream partners).
- 36- Scope 1 emissions refer to the direct emissions from sources owned and controlled by the project. Scope 2 emissions refer to emissions from the purchased energy used by the project (in the form of electricity or fuel). Scope 3 emissions refer to the emissions in the supply chain (both upstream and downstream partners).