Livestock Market Systems Resilience Analysis: Haiti

USAID Feed the Future Programme d’Appui à la Rentabilisation de l’Elevage (PARE)
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### ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMELP</td>
<td>Activity Monitoring, Evaluation and Learning Plan</td>
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<tr>
<td>BAC</td>
<td>Communal Agricultural Offices</td>
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<tr>
<td>BDS</td>
<td>Business Development Services</td>
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<tr>
<td>DDA</td>
<td>Directions Départementales Agricoles (Departmental Agricultural Directorate)</td>
</tr>
<tr>
<td>HRASA</td>
<td>Haiti Resilience and Agriculture Sector Advancement</td>
</tr>
<tr>
<td>iDE</td>
<td>International Development Enterprises</td>
</tr>
<tr>
<td>LMSRA</td>
<td>Livestock Market Systems Resilience Analysis</td>
</tr>
<tr>
<td>LMSRS</td>
<td>Livestock Market Systems Resilience Strategy</td>
</tr>
<tr>
<td>MARNDR</td>
<td>Le Ministère de l’Agriculture, des Ressources Naturelles et du Développement Rural (Ministry of Agriculture)</td>
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<tr>
<td>MEL</td>
<td>Monitoring, Evaluation and Learning</td>
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<tr>
<td>MSD</td>
<td>Market Systems Development</td>
</tr>
<tr>
<td>MSR</td>
<td>Market Systems Resilience</td>
</tr>
<tr>
<td>MSRI</td>
<td>Market Systems Resilience Index</td>
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<tr>
<td>PARE</td>
<td>Programme d’Appui à la Rentabilisation de l’Elevage</td>
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<tr>
<td>RFZ</td>
<td>Resilience Focus Zones</td>
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<tr>
<td>ROI</td>
<td>Return on Investment</td>
</tr>
<tr>
<td>SMEs</td>
<td>Small and Medium Enterprises</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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I. EXECUTIVE SUMMARY

The Programme d’Appui à la Rentabilisation de l’Elevage (PARE) Activity contracted Vikara Institute to conduct a Livestock Market Systems Resilience Analysis (LMSRA) to inform a Livestock Market Systems Resilience Strategy (LMSRS) in collaboration with PARE Activity staff, applying the United States Agency for International Development (USAID) Market Systems Resilience (MSR) Framework to understand how market systems respond to shocks and stresses by assessing the dynamics of a market system according to four structural domains (Connectivity, Diversity, Power Dynamics, & Rule of Law) and four behavioral domains (Cooperation, Competition, Decision-Making, & Business Strategy). The assessment covered the Northern and Southern Resilience Focus Zones (RFZ) of Haiti, including the North, Northeast, Central, and South departments of the country, and focused on three livestock categories: cattle (meat and dairy), poultry (meat and eggs) and goats/sheep.

1.1 KEY TRENDS INFLUENCING MARKET SYSTEMS RESILIENCE

Through the assessment, several national level trends emerge that are generally influencing resilience throughout Haiti. There are also some trends that are unique to each livestock category. Haiti has been and continues to be affected by recurring shocks and stresses – political turmoil, natural disasters, outbreaks of disease, to name a few. Interestingly, the resilience strategies that have evolved in Haiti are not overly reliant on informal community coping mechanisms or kinship ties, government social safety net services, or donor programs. Rather, coping strategies do seem to be reliant on market mechanisms, fragile as they may be. More rural farming communities seem to rely on communal coping mechanisms or civil society organizations like churches for social safety net services, but these are not the dominant patterns.

1.1.1 NATIONAL LEVEL TRENDS

Centralized power

The research indicates that markets have evolved in a landscape where power is centralized in Port-au-Prince, including input and end markets. Such levels of power concentration are inherently fragile. Given the reliance on market mechanisms for coping with shocks and stresses, and the reliance of many market mechanisms on Port-au-Prince, households, communities, market actors and market systems are struggling to adapt as Port-au-Prince has fallen into a form of chaos. In the Northern RFZ, where connections to the Dominican Republic have provided some level of diversity in terms of access to input and end markets, they have fared better than the South which is more reliant on Port-au-Prince.

Veterinary support services

The Directorate of Animal Production and Health in Port-au-Prince has decentralized offices in each Departmental Agricultural Directorate (DDA), which coordinates animal health activities at the level of the Communal Agricultural Offices (BAC). The research indicated that government veterinary services are weak and have gotten weaker during the most recent social and political instability. It seems that private veterinary services are starting to fill this gap, adapting to stabilize access and even grow, when possible, in both the Northern and Southern RFZ. Four interrelated challenges were cited as limiting the private sector: inflation and exchange rates are squeezing margins to the point of losses, particularly for imported medicines and vaccines; and cold storage and transport are spotty and expensive due to lack of access to energy, increasing spoilage and further stressing already thin margins.
Trade

Trade flows both domestic and international, especially with the Dominican Republic were identified as having an important effect on market systems resilience:

- **Domestic trade** has changed substantially as a result of the current political unrest and resulting social-economic troubles in Port-au-Prince. As Port-au-Prince has become increasingly cut off from the South, Southern livestock market actors have had to adapt or substantially retrench. Respondents also indicated that connectivity between the Northern and Southern regions was limited, which meant the North and South were less able to adapt to the challenges in Port au Prince.

- International trade with the Dominican Republic has been particularly important for market systems resilience of the Northern region. Through cross-border trade flows, market actors have been able to access important veterinary medicines, supplements, feed, day-old chicks, and other inputs. In contrast, the South has no real direct trade with the Dominican Republic – most imports first go to Port-au-Prince, which is why the South has struggled to access critical products.

International trade in the region is limited, but potentially important. Haiti is already reliant on imported inputs, but most imports flow through the Dominican Republic, even if they come from other countries in the region like Brazil or the US. Having more and more varied connectivity in the region would improve access to inputs, knowledge, access to varied end markets especially for goats, etc., which would improve market systems resilience.

Enabling environment

There are a few noteworthy trends related to the enabling environment. First, government agencies are struggling with centralized planning and decision-making, making it difficult to address regional issues. Government agencies have been trying to fix problems by providing direct services to the livestock sector, such as feed, veterinary services, and breeding, instead of improving the enabling environment for market actors to deliver these functions. Interestingly, with respect to connecting with the Dominican Republic for inputs, government representatives see them as competitors.

Financial sector

Decision-making for the traditional financial sector is also centralized in Port-au-Prince. While most financial service providers don’t seem to have dedicated products for agriculture/livestock, a few do have agronomists on staff to manage agricultural clients. Repayment rates on loans have been affected by the various shocks and stresses impacting the agriculture/livestock sector. It seems that most financial services for smallholder producers are informal and flow through market actor relationships, in particular through aggregators/Madan Saras1, providing loans in exchange for exclusive access to smallholder’s livestock.

Academia and research

Universities operate livestock facilities that serve both as research facilities and a source of revenue. The shocks and stress affecting the overall livestock market systems are also impacting academic institutions. There is a gap in private sector access to research.

Social safety net and coping mechanisms

Haiti lacks effective formal government supported social support structures. Instead, risks are primarily managed at the individual household or through informal networks. Although there were indications that rural communities shared resources during shocks and stresses, most respondents indicated that they rely on diversified income streams or an ability to dip into savings by selling cattle or goats to manage shock and stresses. This means that there is a heavy reliance on market mechanisms such as open market

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1 Women traders in Haiti who purchase, distribute, and sell livestock, agriculture, food and other essential items.
structures, transactional tactics (i.e., zero-sum, manipulation of grades/standards, etc.), commercial relationships, diversified livestock, and a portfolio strategy that includes a balance of livestock that can provide consistent cash flow and stored value. As a result, poorer smallholders and small and medium enterprises (SMEs) maintain a “zero-risk/zero investment” coping strategy – they do not take any risks to increase their incomes. They diversify livestock types, grow crops, sell labor, etc. so as not to rely on a single income stream. Given the reliance on market mechanisms for household resilience, catalyzing change in local market systems could result in trade-offs with coping mechanisms. While the literature documents remittances as an income source, the findings in the field research suggest that smallholder farmers are not reliant on remittances. Similarly, while the literature indicates a reliance on donor-funded programs for support, that was not borne out by the field research either. It was, however, perceived that there is more support from international donors than the national government.

### 1.1.2 LIVESTOCK MARKET TRENDS

Smallholders in Haiti manage near term uncertainties by maintaining diverse animals. Each animal plays a different role from a resilience or coping strategy perspective. Poultry is more like an ATM in that it produces cash quickly and is easy to sell on a regular basis. Larger animals like goats and sheep hold value better than poultry, and also turn over faster than cattle, so they also provide a level of consistent cash flow. Cattle are the most stable way for smallholders to manage savings, as cattle provide the best store of value.

#### OVERARCHING LIVESTOCK MARKET SYSTEM TRENDS

| Market instability and related security issues | The livestock market system is challenged by inflation and exchange rates, and lack of reliable cold storage and transport. |
| Animal disease and parasitic infection | Poultry flocks are affected by Newcastle disease, and herbivores by anthrax. Livestock are also challenged with internal and external parasitosis when feed/fodder becomes scarce. |
| Natural disasters | Livestock production is affected by natural disasters which destroy infrastructure, and cause floods or drought which both affect livestock feed/fodder. |
| Energy and fuels | Lack of or unaffordable energy and fuel is affecting transport thereby limiting access to inputs, as well cold storage for vaccines and processed livestock products. |

### 1.2 RECOMMENDED POINTS OF ENTRY

As a market facilitation program, it will be important for the PARE Activity to actively engage stakeholders on the many issues and trends that have been identified through this livestock market system resilience assessment. As a first step, it is recommended that the Activity should work with local market actors/organizations to convene and facilitate stakeholder engagement processes to identify common pain-points, foster stronger connections, and address issues such as:

- Operations of spot or open market
- Veterinary inputs
- Pasture management for cattle and goats/sheep
- Butcheries and slaughterhouses
● Day-old chicks and feed inputs for Poultry
● Connections between North and South
● Dominican Republic links and trade flows
● Financial Services
● Water access and usage
● Energy options – solar, small-scale wind power, biodigesters, etc.

Through the stakeholder engagement processes, specific points of entry for longer term competitiveness, inclusivity and resilience will emerge. These may be opportunities to develop joint ventures co-financed by PARE and private investors. The starting point for stability most often comes from a lead firm that influences its supply chain through formalized contracts/agreement or informal incentives.

**Dairy**

There are at least two existing lead processing firms - Lët Agogo and Ferme Bon Visyion – that are attempting to manage their supply chain through commercial relationships. There are also emergent mixed model businesses where the aggregation/collection hubs are owned by SMEs.

**Cattle**

A more commercial orientation of butchers and slaughterhouses – both in terms of supply chain and end markets – including more professional, hygienic facilities has the potential to open higher-end markets for their products.

**Goats/sheep**

Similar to cattle, improvements in butchers and slaughterhouses could open access to higher-end markets, including trade to the Dominican Republic and other regional markets.

**Poultry**

Smallholder poultry is more likely to develop at scale based on the commercial day-old chick production scaling and becoming increasingly more competitive. Even though they are less likely to include large numbers of smallholders because of scale inefficiencies, emerging outgrower models are adapting to the various stresses and could emerge as viable and scalable. At the same time, there are powerful interests that are importing meat and eggs that will present a real challenge for growing the domestic poultry industry. There is also a country chicken channel that is important for household resilience as many smallholders rely on local bird breeds for income and nutrition. While unlikely to commercialize at scale, there are examples from other countries of niche, commercialized channels around country chickens emerging.

There are also opportunities for strengthening retail distribution market systems through veterinary and agrodealer networks, day old chicks and fodder providers, breeding & artificial insemination services.

### 1.3 SYSTEMS CHANGE FACILITATION GUIDANCE

In order to bring about lasting market systems change, the PARE Activity should adhere to facilitation principles. Project activities need to be viewed from the perspective of the system and how the actors behave in that system, and whether they can bring about change in the system in their own interests. The aim of a market systems development project is to strengthen the capabilities and resilience of a market actor as a means to achieving system change, and not just as an end in itself.
2. BACKGROUND OF PROJECT AND LMSRA

2.1 PROJECT BACKGROUND

The goal of the PARE project is: To increase the resilience of households and communities in the Northern and Southern Resilience Focus Zones through the improvement of the livestock market system. In order to achieve this goal, the project is organized into the following Objectives:

- **Objective 1:** Improve productivity of the livestock sector in the Resilience Focus Zones
- **Objective 2:** Increase the accessibility of inputs and services in the livestock market system
- **Objective 3:** Improve marketing and private sector engagement in the sector.

The PARE project is intended to build inclusive economic growth and economic opportunities for smallholder farmers and the private sector in Haiti through a resilient livestock market system that meets the growing demand for locally produced animal sourced foods (ASF) products. In particular, the project aims to address core characteristics and constraints in the livestock market system, and foster ways to increase the resilience of smallholder farmers to manage shocks and stresses. By 2027, PARE aims to improve the resilience of at least 30,000 households, diversify the livelihoods of 15,000 participants, build capacity of 100 firms; and improve the resilience capacity of 80% of participant households. The project must also facilitate at least $69.3 million in sales of producers, input providers and value-added businesses; leverage $3.6 million in private sector investment and $1 million in financing; and demonstrate measurable improvements in livestock market system resilience.

*Figure 1: PARE results framework*
The project is focusing on the top three livestock categories raised by smallholder farmers in Haiti: cattle, chickens and goats/sheep. PARE will use a market systems development (MSD) approach to facilitate inclusive partnerships with established market actors and build the capacity of emerging actors to catalyze innovation and capitalize on current and emerging opportunities. PARE will leverage a Market Innovation Fund to incentivize market actors to co-create innovative business models. Potential points of entry may include livestock market actors such as: agrodealers, agribusinesses, agrovets, local and national government institutions, universities, chambers of commerce, financial institutions, slaughterhouses, and mini dairies. The PARE results framework can be found in Figure 1, above.

In order to identify high potential points of entry to best engage with public and private livestock actors in each RFZ, the project has carried out a Livestock Market Systems Resilience Analysis (LMSRA) to gain insights as to the unique behaviors and structures in the Haitian livestock market system to identify the most important local partnerships, models and approaches that will achieve project objectives.

2.2 LIVESTOCK MARKET SYSTEMS RESILIENCE ASSESSMENT APPROACH

Vikāra Institute conducted this LMSRA applying the USAID MSR Framework. The framework is a qualitative diagnostic tool for understanding how market systems respond to shocks and stresses by assessing the dynamics of a market system according to four structural domains and four behavioral domains described in Table 1 below.

<table>
<thead>
<tr>
<th>MARKET SYSTEM’S STRUCTURAL DOMAINS</th>
<th>DESCRIPTION</th>
<th>GUIDING QUESTION(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connectivity</td>
<td>The degree or number of connections between market actors in a market system. A market system is more able to withstand shocks if market actors have formed new and different types of connections rather than being reliant on only one type of business relationship or geographic area, for example.</td>
<td>Who’s trading and talking with whom, why, and how is this changing over time? How and to what extent do market actors interact across geographies, ecologies, and social groups?</td>
</tr>
<tr>
<td>Diversity</td>
<td>Diversity and relative distribution of different parts of a market system. Market systems that lack diversity are more susceptible to a single risk and less able to adapt to shocks and stresses.</td>
<td>How much variety is there in products, sales channels, business models, customer segmentation, etc.?</td>
</tr>
<tr>
<td>Power</td>
<td>Concentration and exercise of power in a system. Rather than using power to attain monopolies or unfair bargaining power, market systems are more resilient when power is wielded for firms to build</td>
<td>Where and how is power concentrated and exercised?</td>
</tr>
</tbody>
</table>
The level or degree of equality and fairness inherent in formal and informal rules and laws. Systems are more resilient when formal and informal rules are clear, transparent, and applied consistently.

- **Rule of Law**
  - Who sets and maintains the rules (formal and informal)? Are they consistent and fair?

### MARKET SYSTEM’S BEHAVIORAL DOMAINS
(e.g., norms that shape what most people and market actors do)

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>DESCRIPTION</th>
<th>GUIDING QUESTION(S)</th>
</tr>
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<tbody>
<tr>
<td><strong>Competition</strong></td>
<td>How market actors establish superiority over others who are trying to do the same thing. Competition is defined as rivalry between two or more entities, but competition can be positive or negative depending on how and why it is happening.</td>
<td>To what extent is there rivalry between market actors?</td>
</tr>
<tr>
<td><strong>Cooperation</strong></td>
<td>How market actors collaborate to achieve a common purpose or function. In understanding the domain of cooperation within the context of a particular market system, it is critical to look at the motivation for cooperation, which can be positive or negative.</td>
<td>How are market actors collaborating to achieve a common purpose or function?</td>
</tr>
<tr>
<td><strong>Decision Making</strong></td>
<td>How market actors make decisions, e.g., using evidence versus group beliefs or myths. More resilient systems show patterns of firms and organizations using evidence to inform decisions.</td>
<td>To what extent is evidence used to identify solutions?</td>
</tr>
<tr>
<td><strong>Business Strategy</strong></td>
<td>How market actors achieve their goals e.g., short term extractive orientation versus a growth orientation. Less resilient strategies include maximizing unfair practices such as capturing unfair margins. More resilient business strategies plan for knowable risks and generate value for customers as a growth strategy.</td>
<td>To what extent do business strategies proactively plan for risks? To what extent are they fair and generate customer value?</td>
</tr>
</tbody>
</table>

This approach is useful for understanding the complexity and reality of livestock market systems in Haiti to draw out insights about: the dynamics of market linkages; the inclusiveness and competitiveness of business models; the formal and informal rules influencing trust and cooperation among market actors; the resilience of the system to shocks and stressors; power dynamics; and the political economy. These insights inform recommendations for identifying market systems interventions strategies that can drive...
livestock market systems change in Haiti.

Photo 1: Image taken at "Bon Vizyon Fèm" in Torbek, Haiti.

3. LMSRA METHODOLOGY AND IMPLEMENTATION

3.1 METHODOLOGY

The LMSRA methodology included both secondary and primary research. The secondary research began with desk research of available information, supplemented with pre-field work interviews to vet initial findings and provide insights for the higher-level framing of key issues, trends, and patterns of behavior. The primary field research was conducted through key informant interviews, focus group discussions, and market observations guided by questionnaires.

3.1.1 DESK RESEARCH

The desk research included PARE project and other background materials provided by Venture37 staff, materials recommended by market actors, and openly sourced information from the internet. The project documents provided and reviewed include:

- PARE project agreement with USAID
- PARE Activity Monitoring, Evaluation, and Learning Plan (AMELP)
- PARE Year 1 Workplan
- Baseline Assessment Request for Proposals
- Baseline Assessment Scope of Work
- 2022 USAID/Haiti Economic Growth and Agricultural Development Gender Analysis Report
3.1.2 PRE-FIELD WORK INTERVIEWS

PARE staff conducted an initial stakeholder mapping exercise of livestock market actors in the North, Northeast, Central, and South departments of the Northern and Southern RFZs. From this list, a subset of “High Will/High Skill” individuals/organizations were identified as potential pre-field work informants to vet some of the trends that emerged from the desk research. That list of key information was further refined to ensure that preliminary interviews provided an overview of the geographic focus area of the project, the functional roles of livestock market systems, and targeted livestock subsectors of interest (cattle, poultry, goat, sheep). A list of individuals interviewed, and their associated organizations can be found in Annex I.

3.1.3 QUESTIONNAIRE DEVELOPMENT

Questionnaires were developed to gather additional information on key questions identified during the desk research and pre-field work interviews. These research tools were reviewed and vetted by the field research team and PARE technical advisors prior to commencing with the field research. Six data collection tools were developed in total, and can be found in Annex 2:

- Key Informant Interview Guide for Buyers, Processors, Traders, and Input Providers
- Key Informant Interview Guide for Government
- Focus Group Discussion Guide for Producers
- Key Informant Interview Guide for Financial Service Providers
- Market Observation Guide
- Market Systems Mapping Guide

3.1.4 SAMPLING APPROACH

The sampling of participants for the study were identified through a snowball sampling process. PARE program staff conducted a market stakeholder mapping exercise to identify key market actors in each of the project target areas across each of the focus livestock markets in March 2023. In collaboration with Vikāra Institute, a distribution of interview and focus group participants was selected that would result in a high level of confidence in the LMSRA findings, based on the following criteria:

2 These are individuals or organizations that have the willingness, interest, resources, and skill to participate in market systems led growth.
- Regional/geographic distribution
- Representation of actors by type of livestock and function
- Adequate representation of people in different positions of power
- Potential overlap of market system functions for different types of livestock
- Flexibility to adapt sampling based on new information that emerged during field work.

### 3.2 FIELD IMPLEMENTATION

The fieldwork for the LMSRA consisted primarily of three modalities: key informant interviews; focus group discussions; and market observations. The data gathered provided insights both into the resilience of each market system as well as the mapping of the value chains.

**Key informant interviews** were conducted with key market actors and experts such as: animal stock, nutrition and health products and services providers; finance and market information service providers; local livestock enterprises and entrepreneurs; and climate-smart livestock technologies and management services, breeding advising and service providers, and regional government officials.

**Focus group discussions** were conducted with groups of livestock producers, SMEs/aggregators, or cooperatives members.

**Market observations** were conducted in each of the major livestock markets in the South, North, Northeast, and Central regions, on the main market days for each of those markets. These market observations included conversations with a variety of actors in attendance, from Madan Saras and other traders, to producers, transport service providers, and other service providers.

### 3.3 MARKET SYSTEMS RESILIENCE INDEX

The data gathered from the field work was used to develop a market systems resilience index (MSRI) specific to the Haitian context and different types of livestock. The index was then used to assign a score representing the resilience of each livestock market system at the time of scoring. The general framework for the MSRI is as follows in Table 2 below. The MSRI scores for each different type of livestock can be found in the narrative in Section 4.2.

**Table 2: Market Systems Resilience Index Domains and Criteria Table**

<table>
<thead>
<tr>
<th>MSR Domain</th>
<th>Criteria</th>
<th>Valuation</th>
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<tbody>
<tr>
<td><strong>STRUCTURAL DOMAINS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Connectivity</strong></td>
<td>Number of connections vertically and horizontally</td>
<td>The more connections, especially across social/market network boundaries, the higher the score. The lower the connections, especially across social/market network boundaries, the lower the score.</td>
</tr>
<tr>
<td></td>
<td>Number of connections to support market services/functions (i.e., ag specific, finance, etc.)</td>
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<tr>
<td></td>
<td>Ease of mobility and communications (i.e., roads, security, mobile networks, etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>Diversity</strong></td>
<td>Diversity of types of products, services, etc. in a system</td>
<td>The greater the diversity in products/services, business</td>
</tr>
<tr>
<td>MSR Domain</td>
<td>Criteria</td>
<td>Valuation</td>
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<td>--------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Diversity in business models in a system</td>
<td>models, and value chain governance type, the higher the score. The less the diversity in products/services, business models, and value chain governance type, the lower the score.</td>
<td></td>
</tr>
<tr>
<td>Diversity in channel governance type (i.e., open, lead firm, etc.)</td>
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<td></td>
</tr>
<tr>
<td><strong>Power Dynamics</strong></td>
<td>Incidence of government assertion of power via policy development, enforcement practices, etc.</td>
<td>The greater the incidence of sharing and/or diffusing power in government and market systems, the higher the score. The greater the incidence of imposing and/or concentrating of power, the lower the score.</td>
</tr>
<tr>
<td></td>
<td>Incidence of market power concentration (i.e., number of large/dominant firms)</td>
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<tr>
<td></td>
<td>Incidence of zero-sum negotiating tactics (i.e., power wielded to capture unfair margins)</td>
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</tr>
<tr>
<td><strong>Rule of Law</strong></td>
<td>Existence of uniform grades and standards</td>
<td>The greater the incidence of fair, transparent and consistent application of rules, the higher the score. The greater the incidence of unfair, arbitrary, and inconsistent application of rule, the lower the score.</td>
</tr>
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<td></td>
<td>Compliance with agreements in the sector</td>
<td></td>
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<td></td>
<td>Level of corruption in regulatory interactions with market actors</td>
<td></td>
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<tr>
<td><strong>BEHAVIORAL DOMAINS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Cooperation</strong></td>
<td>Incidence of alliance building investments along supply chains or retail distribution networks</td>
<td>The higher the incidence of positive cooperation, or market actors working together to deal with joint threats and opportunities that lead to increased value addition would increase the score. The higher the incidence of market actors working together to capture unfair margins of consolidated power would decrease the score.</td>
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<tr>
<td></td>
<td>Incidence of joint efforts around threats and opportunities</td>
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<tr>
<td></td>
<td>Incidence of cooperation to wield power to capture unfair margins (i.e., cartels, etc.)</td>
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<tr>
<td><strong>Competition</strong></td>
<td>Incidence of supply chains/market systems competing as a unit against another chain/international competitor</td>
<td>The higher the incidence of firms/groups of firms competing on the value they deliver to customers, staff and suppliers, the higher the score. The</td>
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<tr>
<td>MSR Domain</td>
<td>Criteria</td>
<td>Valuation</td>
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<td>Extent to which actors in the market systems focus on internal performance versus external attacking of competitors as a way to improve competitive position</td>
<td>higher the incidence of firms/groups of firms competing on their ability to hurt/diminish their competitors the lower the score.</td>
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<td></td>
<td>Extent to which customer value determines competitive position</td>
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<tr>
<td>Business Strategy</td>
<td>Investment in data gathering and analysis by market actors</td>
<td>The greater the orientation and operating/investment patterns are tied to generating value addition for their customers, staff and suppliers, the higher the score. The greater the orientation and operating/investment patterns are tied to capturing a margin, the lower the score.</td>
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<tr>
<td></td>
<td>Orientation (i.e., the primary objective/driving interest of engaging in business) on customer needs/value addition</td>
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<td>Level of investment in staff/organizational capacity development and retention</td>
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<tr>
<td>Decision- making</td>
<td>Investment in data gathering and analysis by government/civil society</td>
<td>The higher the incidence of government/civil society using data and evidence to engage and build consensus on how best to deal with threats and opportunities, the higher the score. The higher incidence of government/civil society making decisions without effective evidence or participatory processes, the lower the score.</td>
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<tr>
<td></td>
<td>Incidence of use of evidence in policy development/strategy development in government and civil society</td>
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<td></td>
<td>Incidence of participatory processes when developing policies/strategies for government/civil society</td>
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4. RESULTS AND FINDINGS

4.1 NATIONAL LEVEL TRENDS

For decades now, Haiti has experienced seemingly constant shocks and stress, creating persistent pressure on market actors to adapt to high levels of uncertainty. The research indicates that communities, market actors, and market systems have evolved strategies and tactics to manage this level of uncertainty through no-risk/no-invest livelihood strategies and tactics. Interestingly, these coping strategies are not overly reliant on informal community coping mechanisms, government social safety net services, or donor programs. Rather, they do seem to be reliant on market mechanisms such as informal finance tied to transactions, shared cattle management schemes, negotiation tactics, open market structures, diversified income streams, and different types of animals that balance cash flow and stored value characteristics. This is not universal, as more rural farming communities seem to rely on communal coping mechanisms or civil society organizations like churches which provide a form of social safety net services, but these were not dominant patterns. The research indicates that to a great degree, and especially in the South, those strategies and tactics evolved in a landscape where power (i.e., both political and market) is centralized in Port-au-Prince. As a result, most inputs and end markets are in or linked via Port-au-Prince. Such levels of power concentration are inherently fragile. Given the reliance on market mechanisms as a coping mechanism, and the reliance of many market mechanisms on Port-au-Prince, households, communities, market actors and market systems are struggling to adapt as Port-au-Prince has fallen into a form of chaos and armed gangs have erected barriers essentially cutting off the South. In the North, where connections to the Dominican Republic provide some level of diversity in terms of access to input and end markets, they have fared better than the South which is more reliant on Port-au-Prince. Still, the Haitian and Dominican Governments have, at times, made it difficult to access Dominican inputs.

4.1.1 VETERINARY SERVICES

The headquarters of the Directorate of Animal Production and Health is located in Port-au-Prince with decentralized veterinary services in each Departmental Agricultural Directorate (DDA) of the country
which coordinate animal health activities at the level of the Communal Agricultural Offices (BAC).

Despite this theoretically straightforward organizational structure, livestock veterinary services in Haiti are generally limited and not widely available. The country’s veterinary infrastructure remains weak, and there is a shortage of trained veterinarians and veterinary technicians. According to the Food and Agriculture Organization (FAO), there are only approximately 70 Government employed veterinarians in Haiti\(^3\), which is far below the recommended ratio of one veterinarian for every 10,000 animals. Other sources suggest there are currently only 55 veterinarians employed by the Ministry of Agriculture (MARNDR), for its 10 departments.\(^4\) MARNDR tried to fill this gap with a much larger network of so-called Veterinary Agents deployed by the communal health committees called “Groupman Sante Bèt” (GSB), established in 1997. These agents perform relatively simple tasks like administering vaccines. The World Organization for Animal Health (OIE) has long been calling on MARNDR to take control of the organization and provide veterinary services across the country.\(^5\)

The field research reinforced these documented findings that government veterinary services are weak and have gotten weaker during the most recent social and political instability. Government respondents indicated that while regional offices want to improve, the current political chaos has all but eliminated their ability to respond to farmer needs. The field research indicated that private veterinary services are starting to fill this gap. Private sector respondents indicated that service providers in the North and South are adapting effectively to stabilize access and even grow when possible. For example, in the North, one agrovet stated:

> “We have chosen to engage in the training of young people in agricultural entrepreneurship and we have introduced ourselves in the production of chickens in order to diversify the opportunities, this has allowed us to create jobs and expand the veterinary services. But the pharmacy invests mostly in the purchase of new products with a lot of transportation expenses that have become so costly.”

Similarly, in the South, private veterinary service providers perceive the situation as difficult, but with plenty of opportunities to grow. Another agrovet indicated that, “…since 2019 I see that the company is growing day by day despite the difficulties.” Interestingly, they identified the importance of customer service, including improving how to support and respond to customers especially when they are unhappy, as central to achieving their growth goals.

While private sector veterinary service provider respondents do see and are investing in opportunities, they also cited four interrelated and interdependent challenges that are limiting their ability to deliver value to their current and potential customers. Specifically, inflation and exchange rate challenges have hurt private sector veterinary service providers as most medicines and vaccines are imported, squeezing margins to the point of losses. Once they do get vaccines and medicines, they are struggling to store and transport them effectively, since spotty and expensive access to energy has led to insufficient cold chain increasing spoilage rates, further stressing already very thin margins.

While the research did indicate that via universities, veterinary businesses, and government offices there are resources to train people on veterinary skills, there does not appear to be commercial incentives to harness or connect the need for veterinary skills and the resources to provide those skills. For example, there are veterinary businesses and agrodealers that could provide a commercial platform for networks of village vet agents to emerge, but there was no indication of such networks emerging yet. There is also an example of a university sending a few interns into rural communities to support improved agricultural production, but it was not clear if vet services are part of this process.

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\(^3\) OIE. 2010.  
\(^4\) https://lenouvelliste.com/article/167890/pour-la-valorisation-de-lelevage-en-haiti  
\(^5\) OIE. 2010.
4.1.2 TRADE

National

Official statistics from the MARNDR strategic document for 2010-2025<sup>6</sup> indicate that there is substantial supply and a strong demand for livestock products that could provide the foundations for a more competitive national livestock market system. For example, some statistics include:

- 55% of farms raise 1,500,000 cattle
- 65% raise 2,500,000 goats
- 80% raise 4,000,000 chickens
- $50,000,000 is spent annually on importing 90,000 metric tons of dairy products
- There are approximately 300,000 adult cows, with the potential to produce over 100,000 metric tons of dairy products annually
- 5,000 family units of laying hens have the potential to produce a national production of 24 million eggs per month.

At the same time, respondents indicated that internal trade flows have changed substantially as a result of the current political unrest and in particular, the chaos that has followed in Port-au-Prince. In particular, respondents indicated that the South is very dependent on Port-au-Prince, so as Port-au-Prince has become increasingly more cut off from the South, Southern livestock market actors have had to adapt or substantially retrench. For example, one respondent cited a 60% decrease in revenues due to the South being essentially cut off from Port-au-Prince. Respondents also indicated that connectivity between the North and South was limited.

Dominican Republic

In the North in particular, respondents confirmed the importance of trade and information flows across the border with the Dominican Republic. To a great extent, the ability of respondents in the North to weather the current challenges in Port-au-Prince, is due to the connectivity with the Dominican Republic. Through these trade flows, market actors have been able to continue to access important veterinary medicines, supplements, feed, day-old chicks, and other inputs. Additionally, farmers rely on selling their livestock, especially goats to Dominican buyers. While probably undercounted, it is estimated that between 20,000 and 50,000 goats are sold each year from Haitian farmers to Dominican buyers. These sales are all informal and generally preferred to selling locally since Dominican buyers buy on weight, as opposed to Haitian buyers that buy on sight/visual inspection. The respondents indicated that access, while critical, can become spotty as a lot of trade is informal and subject to unexpected stoppages or changes in volumes, timing, etc. Formal trade continues to flow, but respondents indicated the process has become more difficult given inflation and exchange rate challenges that have made imports cost prohibitive for many respondents. Respondents also indicated that Dominican suppliers, especially for day-old chicks, feed, and veterinary medicines/vaccines, can provide inputs of questionable quality.

In contrast, the South has no real direct trade with the Dominican Republic, but they are reliant on products that are produced in or flow through the Dominican Republic. Most of the imports from the Dominican Republic have first gone to Port-au-Prince, which is why the South has struggled during the chaos, as these critical products have become very difficult to access.

Beyond the immediate challenges related to accessing inputs like veterinary medicines/vaccines, day-old chicks, feed, etc. and exporting livestock, respondents indicated that connections to the Dominican Republic are critical to the longer-term competitiveness of the livestock market systems. Respondents indicated that improving, easing and expanding formal flows, including to the South, are critical, especially

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a much more robust exchange of knowledge/technology, to improve longer term competitiveness and resilience.

**International**

Respondents indicated that access to other regional markets, technologies, etc. is very important, but difficult given almost all imports and exports flow through Port-au-Prince. While respondents indicated that direct connections between other regional and international markets and the North and South would be important to improving market system resilience, they also indicated the alternative ports are expensive, managed poorly, or not functional. Of particular importance would be improving alternative sources of inputs, especially veterinarian medicines that can over the long term be imported directly into the North and South. There is also potential for goat exports into the region over the medium to longer term as it would require improvements in the disease control, breed improvements, animal husbandry, etc.

**4.1.3 GOVERNMENTAL OPERATIONS IN THE NORTH AND SOUTH**

The government is certainly struggling as the central departments are all caught up in the political turmoil in Port-au-Prince. Even with the challenges related to unclear authority to make decisions and lack of resources, regional offices are working and trying to roll out efforts to support the livestock market systems. For example, the offices in the south and north both indicated that they are supporting efforts to track disease, provide advice, provide some inputs, and support recovery. The DDA Sud as part of MARNDR has been working on a number of projects, including epidemiological surveillance; organizing vaccination campaigns; sensitizing breeders and popularizing new breeding techniques. The DDA Sud Santé Animale is rolling out Teschen and Pès Pòsin Klasik7 (PPK) vaccination campaigns; the Northern DDA is engaged in supporting better breeding.

Although government respondents all indicated that they are engaged in various programs to support livestock, they also identified a range of challenges that are not necessarily linked to the programs they are rolling out. For example, in the South, government respondents indicated that theft and the business capacity of farmers and SMEs are the important challenges, but they highlighted their efforts on agronomy and various handouts. The Northern respondents indicated a closer link between concerns and programs with feed and access to water, vaccines and medicines listed as major concerns, which are related to the efforts on providing vaccines and improving breeds. An interesting pattern was the focus of the government respondents on fixing problems, as opposed to improving the enabling environment so market actors can develop or access solutions. For example, respondents mentioned issues related to business capacity, commercial service (i.e., feed, vet services/products, breeding, etc.), etc. that they want to provide directly, even though these would typically be delivered by the market system.

Another interesting pattern is the struggle regional offices are having with central decision-making nodes of the government. For example, respondents indicated that various offices/departments in Port-au-Prince were managing the government response to insecurity and inflation challenges, but they were not sure what was being done. The regional government respondents all indicated that insecurity and inflation are damaging the livestock market system, but they were not able to adapt or respond since they do not have the proper authority.

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7 *Peste Porcine Classique* in French; *Classical Swine Fever* in English.
The respondents also recognized that connectivity and trade with the Dominican Republic are important, but outside their purview. Interestingly, some respondents perceived the Dominican Republic as a competitor, as opposed to an important ally in building regional competitiveness. Haiti is unlikely to evolve beyond its current set of challenges without improved connectivity and interdependence with the Dominican Republic. For example, respondents indicated that the government did not have any plans to improve access to critical inputs, which mostly flow through the Dominican Republic. While it would certainly make sense to encourage some localized production of inputs, it will also be important to improve the flows of quality assured inputs via the Dominican Republic to livestock market actors. Over the near to medium term, the Dominican Republic market systems for livestock inputs will be critical to the resilience and competitiveness of the Haitian livestock market systems, so improving the connectivity and responsiveness of Dominican Republic input firms will be an important leverage point.

While the regional offices are engaged with local livestock market actors and doing what they can, they also indicated that they are not fully empowered to adapt to the changing contexts in their region. For example, the Northern DDA indicated:

“We try to mitigate these risks through training. But the efforts are very little. If we look at the actions, it is almost insignificant (for example the vaccination campaign for pigs)“.

Respondents also indicated that longer-term planning is discussed, but not actually applied. For example, respondents indicated that, due to the ineffectiveness of the Government of Haiti, there are no strategic planning efforts related to comparative advantages that some livestock may have in some geographies. Respondents indicated that some natural selection has evolved so there are concentrations of certain livestock in certain geographies, but the government and the industry have not played a role or tried to influence how the livestock market systems are evolving.

### 4.1.4 FINANCIAL SECTOR

According to respondents from the financial services market system, the financial services market system has a lot of experience managing through shocks or stresses through the years. However, the current political instability and the resulting descent of Port-au-Prince into chaos has presented some unique challenges and increased market instability of livestock input and end markets clients, as well as further weakening the already fragile sense of rule of law. Despite the rolling sets of shocks and stresses, financial organizations continue to work as best as they can. For example, all the responding organizations indicated
they have remained engaged in agricultural lending, including lending to market actors in goat, sheep, poultry, cattle and dairy market systems. Their clients include larger firms/farms, SMEs, cooperatives, farmers, and individuals. They are providing loans for capital equipment/growth, working capital, micro-loans, finance for savings and loan groups, and other products like savings accounts. Respondents indicated that while collateral remains an essential element of assessing creditworthiness, they are also trying to place more emphasis on cash flow, business planning, joint guarantees, insurance, etc. Respondents did not indicate credit scoring as viable yet, but they indicated that they are interested once the current situation starts to stabilize.

While most respondents indicated they do not necessarily have tailored agricultural products and services, one respondent did indicate that they have dedicated agronomists on staff to manage agricultural clients. Additionally, the agricultural portfolios ranged from 7.6% to 18.9% of their total portfolio, according to the respondents that provided figures. While not the majority of their lending, it is a positive sign that a substantial portion of their portfolio remains in agriculture. Given the high levels of risk associated with smallholder agriculture and the added uncertainty in Haiti currently, it would be expected that agricultural lending would drop as a percent. However, indications are that financial service providers are adapting so that they can maintain their livestock clientele.

Even though most of the respondents indicated that they are managing to stay viable, they also cited a range of shocks and stresses that are compounding to make it very difficult at the moment. They cited a range of expected stresses that remain a challenge for their livestock clients such as disease, pests, low productivity, market volatility, as well as natural disasters like hurricanes, droughts, and floods that happen regularly. They also mentioned events like earthquakes that are not that regular but have had long-term effects. The current set of challenges stem from the political instability and include issues like insecurity, unreliable transportation, lack of access to inputs and end markets, fuel, or stable energy supply, and migration. The combination of accepted shocks and stress with these newer ones is putting a lot of pressure on livestock clients that in turn are struggling to repay their loans. All respondents indicated that non-repayment rates are all increasing and for some respondents the increases are significant. One respondent cited a jump in non-repayment rates to 45%, which caused real concern and catalyzed a major response by the bank to engage customers around repayment issues that has brought that figure down to 12%. While better than 45%, 12% is not viable in the long-term and is indicative of an environment that is very difficult for financial service providers. Respondents also indicated that they are struggling to maintain a viable level of liquidity since the financial services market system is centralized and tied to accessing Port-au-Prince, which has become very difficult. One respondent during an interview indicated that the current situation is pushing banks to rethink their centralized decision-making.

Interestingly, many respondents indicated that they have been testing and improving approaches to managing clients that are struggling with repayment, as the context has been difficult for many years. Respondents cited efforts to provide advice, training, capping interest rates, and maintaining good communications with clients. Respondents all indicated that they would work closely with clients to make sure they do not have to take legal action, as that step is difficult and only used in the most-dire consequences. For example, Caisse Populaire le Dauphin stated:

“In 2011, we created products to serve people in situations that were difficult. For that we put in place technical tools to help people who may have difficulties providing certain documents, by accompanying them to comply as they go along. Today these tools are becoming essential to bring the Caisse [Populaire] down to earth while remaining effective and respectful of the principles.”

However, respondents indicated that the current contexts are pushing them to focus a lot more on applying tools and tactics to restructure or refinance loans so clients can better manage repayments based on their circumstances. They stated that even with all the experience and best intentions, there are limits on what they can do given the liquidity squeeze on the financial services market system and the high degree
of political and market instability. As a result, it is getting harder to manage. External support to improve and smooth the process of restructuring and refinancing would be helpful.

Respondents are focused on stability and limiting the downside effects of the current contexts; they are most concerned with making sure their current portfolio remains viable. While one respondent did indicate that they have had an increase in the number of clients recently, most respondents are treading water trying to stay afloat.

It is also important to mention that most financial services are informal and flow through market actor relationships. While the informal nature of such financial services means that more defined research would be needed to get a sense of scale of informal finance, respondents indicated that family and trusted local market connections are the primary source of informal finance. In particular, even though there is a widespread perception that aggregators/Madan Saras are extractive in how they negotiate/engage in cartel-like behavior, they also are an important source of finance to smallholders. Typically, a local trader that has some sort of social connection to the farmers provides finance to smallholders in exchange for exclusive access to a smallholder’s livestock. While not widespread, there were some indications that input providers including veterinarians, agrodealers, etc. provide inputs on finance at times. More research would be needed to understand the contexts and incentives around these informal financial flows, but it does seem clear that such flows could be harnessed to improve the overall financial health of livestock market systems.

4.1.5 ACADEMIA AND RESEARCH

Universities are active in running operations related to livestock, as part of their academic and research interests, as well as generating additional income. While a few universities get some support for basic operations from the state, they rely on generating income to fund practical learning efforts. For example, in the South the Université Notre Dame d’Haïti indicated active engagement by managing their own h cotton cattle, goats/sheep, dairy, and poultry (both meat and eggs). In the North, University of Limonade indicated active poultry operations, as well as active involvement in various agricultural donor projects.

The university respondents indicated that the current challenges are putting additional financial stresses on their ability to provide practical learning experiences for their livestock students. They also indicated that it has become increasingly clear that they need to expand their connectivity, especially to private sector actors. University of Limonade stated that:

“The university is beginning to recognize the importance of connecting not only with the community, but also with the private sector. For example, an investor asked for a study on potatoes, but the university is not ready to do this research.”

This statement also indicates that there is a gap in private sector access to research. While most respondents indicated that they are operating at a small scale, some respondents indicated that they need information and insights to grow. Additionally, the University of Limonade is also running an internship program for their students with rural families, where students are placed for 15 days. This indicates that there is a foundation for universities to develop more robust feedback loops linking smallholders, students, and private sector actors to improve how livestock systems function.
4.1.6 SOCIAL SAFETY NETS AND COPING STRATEGIES

In 2021, FAO conducted a study looking at a variety of shocks (e.g., natural disasters, disease/death, loss of income, etc.) and their impact on resilience of rural households. Results included that no less than 58% of rural households dealt with a shock of some sort in the three months preceding the survey. More than half of households reported a loss of income compared to the same period of the previous year; and 15 percent of households reported a drop in income of more than 50 percent. This decline is particularly noticeable for households deriving their main source of income from daily non-agricultural work, petty trade, and cash crops. Fishermen, livestock farmers, and day laborers are also affected by a decrease in income, but they represented only 4 percent of the total sample. 63 percent of cereal producers reported a drop in their income. Government support to structures to minimize shocks are virtually non-existent. The lack of formal social safety nets and emergency response services indicate that risks are primarily managed at the community, household and/or individual level. The field research affirmed that over time many communities in Haiti have withered with migration and health stresses on the population, limiting their ability to provide effective informal community-based coping mechanisms. Respondents, regardless of region, tend to rely on a relatively small network of friends and family, weather challenges on their own, or access support via churches and international donor efforts. Very few respondents indicate that they receive support from the government, although regional government respondents indicate they have provided direct support in the form of animals, feed, information, etc.

Most of the more commercial respondents indicated that they either work with other market actors or manage on their own when faced with a shock or stress. For example, ECOCHAMP when asked if they have used social safety net services stated, “Never and we are a commercial company that does not seek this type of support which is counterproductive.” Multiple commercial respondents indicated a similar sentiment that as commercial entities they do not rely on government or donor handouts when managing shocks and stresses. Another example of a common coping tactic is cooperation around managing livestock. A substantial portion of livestock that is owned by a market actor is managed by someone else as part of an informal management scheme. These informal agreements tend to be between people in the same friends and family network as they require a lot of trust since owners ‘handover’ their cattle to another person to care for the animals. This practice is particularly important as a coping strategy especially in relation to cattle. Typical compensation arrangements include getting a share of the proceeds for managing another market actor’s cattle, upon sale of the animal (i.e., 50% share), and/or receiving the second calf. This agreement reinforces social capital networks, diffuses risks/returns across the network, increases savings within friends and family networks, and can provide a way for lower income individuals in the network to generate wealth and savings (i.e., farmers with land and no animals often offer their land and labor to manage another person’s cattle for cash or calves).

Zero-risk/zero investment strategy

For poorer farmer respondents, and some SMEs, maintaining a zero-risk/zero investment strategy is an important coping strategy, especially given an increasing reliance on market mechanisms. In line with the desk research, the field research indicated that farmers and many SMEs do not take risks to increase their income. They diversify livestock types, grow crops, sell labor, etc. to ensure a minimal level of income without focusing on a single income stream. Given the reliance on market mechanisms to maintain a minimal level of cash flow for household resilience, catalyzing change in local market systems could require trade-offs with coping mechanisms, given there is no formal social safety net. For example, poultry farmer respondents indicated that since day-old chicks, vaccines, and medicines have become cost prohibitive or unavailable, they lost most or all of their flock. For such farmers/SMEs, having other animals, crop production, or regular wage labor would have been, in all likelihood, central to their ability to maintain

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8 FAO. 2021.
9 Derivois et al. (2018).
household resilience. On the other hand, if they had specialized in poultry, which would make sense from a traditional value chain perspective, they would have had substantially more difficulties weathering the recent challenges.

Remittances
While the desk research indicated remittances are important for many Haitians, the field research did not find many respondents that rely on remittances. For example, there was only one trader that explicitly stated that they rely on “…international money transfers from members of the family” to manage shocks and stresses.

Donor funded programs
Respondents did not indicate that donor programs were widespread, although there were respondents that stated they or someone they knew received some support from a donor in the form of food, inputs, cash, etc. related to a shock or stress. While not a dominant pattern, more smallholder and SME respondents cited international donor support than support from local or national government.

4.2 MARKET SYSTEMS RESILIENCE BY VALUE CHAIN

4.2.1 LIVESTOCK MARKET SYSTEM
With a few exceptions, mostly in poultry, farmer respondents are not specialized or do not perceive themselves as associated with a single type of livestock. The field research reinforced the insights from the desk review that smallholders in Haiti engage markets primarily as a way to manage near term uncertainties by maintaining diverse animals. Each animal plays a different role from a resilience or coping strategy perspective. For example, poultry is more like an ATM in that it produces cash quickly and is easy to sell on a regular basis. Larger animals like goats and sheep provide a better ability to hold value compared to poultry, but also turn over faster than cattle so they also provide a level of consistent cash flow. Cattle provide the most important way for smallholders to manage savings as cattle provide the best store of value. As a result, cattle are not sold unless a need arises that requires substantial resources, which translates into patterns where most cattle are sold during festivals that are important events to maintain social capital. In this context, selling cattle for meat tends to result in a more-lumpy cash flow. Of course, when smallholders produce and sell milk from cows, they do gain some important cash flow. When taken as a whole from the perspective of household resilience, it is important to understand that most smallholders are not oriented to or in a position to commercialize via intensification. They act more as a holding company that manages risks through the diverse animals they own, but there is little indication that they are focused on or are able to shift substantially to generate increasing wealth. In this context, there may be limitations to using a traditional value chain approach that tends to define a market system by a specific livestock. Instead, the analysis seems to suggest that it will be important to balance analytical lenses to look at the overall holding company enterprise, as well as individual livestock, since most producers manage a portfolio of livestock to maintain household resilience.

The field research also reinforced an important finding from the desk research that the more commercially oriented functions in livestock market systems are struggling or retrenching, including commercialized inputs (i.e., day-old-chicks, veterinary medicines, equipment, etc.) and processing. In particular, commercial poultry seems to have struggled more compared to other livestock, which makes sense since a lot of the commercial poultry was dependent on consumers in Port-au-Prince. Additionally, as identified in the desk research, in both Northern and Southern RFZs there are very few functioning slaughterhouses and they focus on their connections to supermarkets. Larger livestock like goats and cattle are slaughtered in open areas on or near public markets where the carcass is cut up right away and offered for sale at the market.
No apparent hygienic norms or regulations are being enforced at these markets. Cattle are only slaughtered when there is known demand and most cattle are slaughtered by so-called butchers (usually men with some experience) who cut meat at the public market receiving remuneration with pieces of meat to resell, rather than cash. Goats can also be slaughtered by butchers, but goats are also slaughtered at home or within villages. Poultry is rarely slaughtered by butchers, as families prefer to kill and prepare poultry.

Respondents reinforced the understanding that most livestock market systems are very localized, sold either within a village or move through open/spot market channels that are undifferentiated. While respondents did not cite the extractive negotiation practices as a stressor, the research team did observe that in open/spot markets there is a strong zero-sum (i.e., negotiating tactics that focus on maximizing margin capture) negotiating orientation. The short-term, margin capture orientation in spot markets tends to affect cattle the most, as cattle are sold and slaughtered in the market. In contrast, goats and poultry are commonly sold within the immediate community. Again, the portfolio nature of farming allows for diverse income flows that provide an important source of resilience but does not really support or incentivize value addition. More specifically, respondents are struggling with a range of specific shocks and stresses that reasonably explain why a no-investment no-risk strategy makes sense from their perspective.

4.2.1.1 MAIN SHOCKS & STRESSES
The following is a summary of the main shocks and stresses affecting respondents in the livestock market system.

(I) MARKET INSTABILITY AND RELATED SECURITY ISSUES
South
Respondents in the South found that market instability and related insecurity issues are important stresses affecting their businesses, including the so-called Peyi Lok (“country on lock”) episodes with major roadblocks (often times guarded by armed groups) preventing any movement of vehicles in and out of Port-au-Prince. They cite variability, including recent larger increases in prices, as a major stressor. They are also frustrated by the uncertainty of access to veterinary drugs, which they say is due to various closures and insecurity along roads, especially roads in Martissant. They report that the combination of market and insecurity stresses has slowed transactions as hours of operation have been cut, increased risks have reduced the willingness of business to sell on credit, end markets have become unreachable, and access to inputs has become unreliable or prohibitively expensive.

North
Respondents in the North also found market instability a major concern. They noted the fluctuations in prices to be a real challenge as they struggle to make a margin. In particular, respondents cited inflation and exchange rate instability as two specific issues that drive much of the market instability. Inflation is making input costs prohibitive, as well as limiting buyers from being able to make purchases. One respondent indicated that inflation has cut business by 60%. Since Northern livestock market actors rely on trade with the Dominican Republic, exchange rate volatility has emerged as a major concern. These interrelated challenges of inflation and exchange rate fluctuations force market actors to constantly adjust and adapt to increased levels of short-term volatility. With the high level of financial volatility and the disconnection with Port-au-Prince, respondents, especially processors, indicated that access to equipment and spare parts have gotten worse. Respondents also cited the roadblocks and related insecurity concerns

11 https://www.seattletimes.com/business/troubled-meat-market-is-key-supplier-for-haitis-capital/ - Accessed 10 March 2023
as a stressor that is affecting their businesses.

**Northeast**

One respondent cited losses of over 50% that have forced them to lay off workers. The same respondent indicated that the losses were not from competitors, but consumption dropping for poultry meat and eggs. Another respondent indicated that the loss of Port-au-Prince as an end market is having a substantial effect on their business since 60% of their production was going there. Similar to the North, inflation and its effects on cash flow and working capital combined with exchange rate volatility has made many inputs from the Dominican Republic prohibitively expensive, which is having the most damaging effect on business. Many respondents indicated that for personal reasons or due to the cost of loans, they are not borrowing from financial service providers to help manage working capital.

**Central**

Respondents indicated that the uncertainty has created a working capital crunch, making it very difficult for SMEs to remain viable. Respondents specifically cited an increase in end customers going to open and informal markets for meat that do not follow any basic hygiene and sanitary practices to save money.

**(II) ANIMAL DISEASE/PARASITIC INFESTATION**

**South**

Respondents in the South stated that the main diseases are Newcastle disease in poultry and anthrax in herbivores, especially in Roche a Bateau. They also cited challenges with internal and external parasitosis which affects cattle, goats and sheep, especially when feed/fodder becomes scarce.

**North**

Respondents indicated that Newcastle is the primary disease with poultry and accessing vaccines is becoming increasingly hard. One respondent did indicate that with proper prevention they can avoid most diseases with poultry. Respondents also indicated that accidents where there are bone fractures are the most dreaded.

> “We do not have enough tools for restraint and surgery. When we are called for equids with a fractured foot for example, we have to immobilize them for 3 weeks for the young ones and 6 weeks for the adults because we don’t have the right equipment.”

**(III) NATURAL DISASTERS**

**South**

Respondents from the South cited hurricanes as a recurrent challenge that results in loss of animals, property, and slows transactions before/during/after hurricanes. They also cited flooding related to hurricanes and general rain events also affect animal health directly and indirectly by reducing access to feed/fodder. Earthquakes were also highlighted as a challenge, especially as rebuilding and recovery is often very slow and often takes years. For example, respondents indicated that many buildings and infrastructure have not been rehabilitated since the 2022 earthquake, including the hydroelectric system of Saut Mathurine.

**North**

Respondents indicated floods and droughts have both had negative effects. Current drought conditions are affecting animals by reducing access to both water and food/fodder, which is increasing morbidity and mortality. Respondents indicated that groundwater access and water rights are unclear creating an ad hoc situation with some able to drill boreholes, others truck in water, and creating tension over who can access local sources. Respondents indicated that as access to water sources becomes more critical tensions are likely to escalate.
Northeast
Respondents indicated that the area is very exposed to drought. Respondents also indicated that a flood of the Massacre River in April swept away many animals that were on the banks of the river even though there was no widespread flooding. The drought is hurting livestock production, especially dairy in the area. The water management issues are similar across all of Haiti.

Central
Respondents indicated that the central plateau is not subject to hurricanes or floods but does have challenges related to drought. There were indications that the RESEPAG project of the MARNDR distributed small pumps to help farmers access water from various hill lakes. However, respondents also indicated that probably due to issues with spare parts, theft of valves and other parts from irrigation systems has increased, making it even more difficult to manage the drought.

(IV) ENERGY AND FUEL
South
Respondents from the South indicated that the unreliability of energy makes storage of veterinary drugs, storage of fresh meat and dairy, and processing of livestock products more difficult. Respondents cited loss of veterinary drugs leading to increased livestock mortality/morbidity. Human sickness and unhygienic conditions have gotten worse. Some respondents in the South indicated that they have or are trying to shift to solar as a way to manage unreliable access to energy. Respondents also indicated that the lack or increased price of fuel is limiting access to inputs and customers. One respondent cited an example of costs doubling to buy new Newcastle vaccinations for their poultry due to increased fuel costs.

North
Respondents, especially veterinarians, butchers, and retail shops require energy to store medicines, fresh meat, dairy and eggs, but few respondents indicated having regular access. As a result, respondents often rely on fuel to run generators. As fuel has gotten more expensive, SMEs that need to refrigerate inventory are seeing their margins reduce and even turn into losses. Fuel costs have also increased transportation costs, further reducing margins for farmers and SMEs alike.

Northeast
Respondents indicated that much of the area does not have access to the electric grid; so they are reliant on fuel for energy. Fuel can be hard to find and when it is available it is expensive. Respondents indicated that the challenges with fuel have forced many market actors to access fuel through the black market, which has also increased quality concerns. One respondent indicated that fuel from the black market damaged their generator. Respondents that do have access to the grid indicated that the inconsistent supply and cost per kilowatt has forced them to shift to generators, but with the fuel challenges they are planning to shift to solar. Other respondents also indicated they have already shifted to solar. Respondents cited the availability and costs of fuel as also driving up costs of transportation, further eroding margins.

Central
Similar to other regions, respondents indicated that few people access energy from the grid, and even then, energy is unreliable, so they have to rely on generators and solar. One respondent stated that they rely on generators and solar for at least six months during the year. The challenges related to fuel has made reliance on generators difficult, as well as increased the costs of transportation.

(XI) LABOR MARKET
South
While not cited by many respondents, it was noted that access to labor and staff has become difficult.
One respondent from the South stated that 60% of their staff left and they have not been able to replace them.

**North**

According to SME and University respondents, the recent Biden visa program is encouraging skilled labor to migrate. Respondents also mentioned skilled labor is also migrating to Canada. Respondents indicated that it can be hard to retain or fill positions that require degrees or some form of valued skill.

### 4.2.1.2 RESILIENCE IN THE LIVESTOCK MARKET SYSTEM

In this context, there is value in understanding resilience from an overall livestock market system perspective.

The MSRI Score for the overall livestock systems is 1.62 out of 4. Figure 2 illustrates the 8 MSR domains. The low overall scores show fragility of market systems resilience, with competition being particularly weak due to high levels of extractive/margin capture negotiating practices. The overall MSRI for the livestock market system indicates the overall system is oriented to be reactive with the structural and behavioral domains combining to reinforce/support a no-risk/no-investment strategy that can provide a consistent income and maintain some level of savings. Overall MSRI scores for each category of livestock can be found in the narrative sections below. MSRI scores broken down by Resilience Focus Zones can be found in Annex 3.

*Figure 2. Livestock MSRI*

#### Livestock - Overall

- **Rule of Law (1.83)**
- **Competition (0.99)**
- **Power (1.89)**
- **Decision-making (1.63)**
- **Diversity (1.68)**
- **Business Strategy (1.38)**
- **Connectivity (1.80)**

Below is a domain analysis at an overall livestock system level:

(I) **STRUCTURAL DOMAINS**

- **Connectivity**: Connectivity was always localized, but with an important reliance on Port-au-
Prince for key inputs and end markets. As a result, with the recent issues with Port-au-Prince, it has become even more localized as access to key inputs and end markets have been cut-off. Respondents indicated that proximity and historical connections in the North to the Dominican Republic have allowed the North to better manage the disconnections to Port-au-Prince. Respondents also indicated that the South has struggled more in terms of finding alternative access to inputs and end markets. In both the North and South the quality of connections are mixed as the various shocks and stresses continue to push market interaction to be short-term and transaction oriented as a way to access needed cash, but there is little indication of extractive negotiating patterns emerging. (MSRI 1.77)

- **Diversity:** While there is less diversity in the South than in the North, respondents in both regions indicated that there is little diversity in input products and services, market channel type (i.e., open market channels dominate), or farm/firm strategy (i.e., no-investment/no-risk – short-term survival). Most likely as a result of the constant uncertainty/high levels or risk, most farms/firms in the North and South maintain diversity in the type of animals owned/produced/managed. Respondents indicated that they are further diversifying into crops and, when possible, value addition such as processed foods. (MSRI 1.68)

- **Power:** While there were only a few indications of power being wielded to capture unfair margins, aggregators and Madan Saras do seem to use their power to set prices. Interestingly, respondents in the North and South did not indicate a pattern of concern or sense of tension around price setting or wielding of power to extract unfair margins. At the same time, key informants indicated that power is almost always wielded during market transactions to capture unfair margins. They also indicated that political power is also commonly wielded in extractive ways. (MSRI 1.88)

- **Rule of Law:** At a systemic level, rule of law is a real concern. Key informants indicated that starting and operating a formal business is very difficult as any interaction with the government is uncertain and extractive. They also indicated that it has gotten worse with the central nodes of government struggling. At the same time, respondents indicated that there is a sense of rule of law in both the North and South in terms of how people go about their day to day lives. So, although respondents indicated that they are concerned with security/banditry along roads that connect their region to other regions, especially Port-au-Prince, they also indicated that there was a sense of security/stability in their region. There were indications that tensions are rising in relation to crop production, pastures, and feed/fodder, especially in relation to increased climate, market and political stresses. Respondents in both the North and South cited increased levels of theft of pasture resources, tensions from animals eating crops, and theft of stored feed/fodder. The disputes that emerged from these tensions seem to be managed locally with very little knock-on effects, but the ongoing accumulation of pressures on access/control of resources is a common trigger for disputes to escalate into conflicts. (MSRI 1.83)

(II) **BEHAVIORAL DOMAINS**

- **Competition:** While there are indications in the North and South that aggregators and Madan Saras engage in zero-sum negotiating tactics (i.e., externalized competition), there is very little indication that such behaviors are affecting how farmers farm. The overall contexts related to costs of input, the orientation of farmers to maintain a minimal level of cash flow, the orientation of SMEs toward short-term transactional strategies, and high levels of instability all indicate the competitive landscape is not oriented toward value addition. At the same time, although there is a dominant pattern of extractive competitive responses, there are also examples of more healthy competitive responses or incidences of firms improving internal performance to improve the value
addition they provide that could be amplified. (MSRI 0.99)

- **Cooperation:** There are some indications that the few retail input and vet services SMEs that remain active in the South and North do engage customers to generate value. In both the North and South there is little indication that buyers work with farmers to increase value addition since the strong transactional orientation disincetivizes alliance building across functions. There are also indications in the North and South that aggregators and Madan Saras engage in cartel-like behavior by cooperating to set prices and insure they get a solid margin, but respondents did not cite this as overly disruptive or unfair (i.e., it does not seem to be increasing tensions/mistrust). There are some exceptions related to dairy processors, but there are not many other livestock examples of effective supply chain management. Farmers in the North and South via cooperatives and farmer associations do engage in some level of effective cooperation. Overall, market actors across all selected regions cooperate as needed, but the cooperation is primarily to manage short-term transactional issues, maintaining basic levels of performance, but with very little cooperation driven by longer-term growth and value addition. (MSRI 1.71)

- **Business Strategy:** In the North and South, SME and farmer respondents have all evolved effective transactional strategies based on multiple income streams (i.e., different livestock, crops, and day labor) to maintain a minimal level of cash flow during the rolling sets of recurrent shocks and stresses over the years. While effective from a household resilience perspective, such strategies do make market systems more fragile as they devalue investment in value addition, systemic diversification/segmentation, and alliance building/shared value investments. (MSRI 1.38)

- **Decision-making:** While regional government offices in the North and South indicated they are trying to respond and make decisions in response to the stresses and shocks they observe, they remain constrained by a centralized authority structure that has become increasingly unworkable given the contexts in Port-au-Prince. There are very little indications that evidence, especially information from constituents is used or valued in relation to adaptation over time. (MSRI 1.63)

The following sections are organized by individual livestock, but there will be some level of redundancy as the systems are integrated in many ways since the zero-risk-zero-investment coping strategies of most producers has resulted in most smallholders producing multiple animals.

### 4.2.2 CATTLE MARKET SYSTEM

The cattle market system includes both cattle sold for meat and the production of dairy products. The cattle and dairy ecosystem maps in figures 3 and 4 below illustrate supply chain actors from inputs through end-buyers and highlights key market environment factors and functions. Respondents indicated that they mix dairy and meat production depending on the contexts and the health of the animal. There was very little indication that smallholders are investing in intensification or specification in relation to dairy or cattle, including an indication that most farmers have mixed and localized breeds. This response pattern aligns with the well accepted idea of a no-investment-no-risk coping strategy. For example, the Association of Milk Producers of Lemonade (APWOLIM), in the North indicated that over time without investment and the incentives to leave, their business is withering away:

“Started in 2016 with 416 members, now at 250 members - people died, left the business, left the region, left the country. About 500 cows among the members, and they were up to 1,000 cows. The maximum they reached was 150 gallons of milk per day [as an association], but now it’s 10 to 20 gallons of milk per day”
Figure 3. Dairy Ecosystem Map
Figure 4. Cattle Ecosystem Map
The cattle and dairy market systems in Haiti includes the following actors, as illustrated in Figure 3 and 4 above:

- Small-scale producers who raise cattle as a store of value and for income.
- Small-scale producers who often milk the cows as well as sell the cattle for meat if the need arises.
- Village markets, regional markets, and urban markets where cattle are sold.
- Traders and intermediaries who facilitate transactions between buyers and sellers.
- Transporters who move cattle from farms to markets and between markets.
- Milk processing plants that prepare various dairy products for end consumption.
- Butchers and slaughterhouses that prepare cattle meat for consumption.
- Support services, including veterinary services, extension agents, government vaccination programs, government registration program, and market information providers.

From the initial desk research, yields per cow were around 1.5 liters per day of which almost all cattle are local creole breeds. Respondents indicated that access to water, feed and veterinary services/products have gotten worse suggesting yields are likely even lower. Ferme André Pierre Agricole Dumas (FAPAD) indicated that they buy veterinary products from the Dominican border and from veterinary pharmacies in the area, but the costs have become prohibitive for many members. They also are struggling with access to water as they need water for animal health and to produce fodder. They stated that, “... to produce fodder on a square of land, we spend nearly 50,000 gourdes (i.e., around 350 USD) in fuel (to transport water), since we are in an area where it rarely rains.” As a result, farmers in both the North and South engage in various ad hoc strategies to access feed/pasture/fodder, but as access to feed/pasture resources are becoming increasingly more limited some farmers are letting their animals graze on crops or are stealing pasture resources. Respondents also cited an increase in theft of animals that has highlighted a weakness in how cattle are marked. Given the current state of increasing uncertainty, tensions related to ownership of animals, and access to key inputs will likely increase and could trigger a rise in disputes and conflict.

APWOLEP (Association of Gable Milk Producers) – “Sometimes other herders steal grass already cut by another herder because the situation is so critical. In times of drought, herders record many cases of mortality caused by lack of food and water. But now there is the identification program which limits thefts. But the rings are regularly lost. It seems that they are of bad quality. Sometimes the ring doesn’t last. If the ring is lost, a certificate of loss is required, which you have to pay for, and then you have to pay for a new ring.”

Respondents also reinforced the perspective from the desk research that both the dairy and meat components of the cattle market system are very immature. There are few viable commercial dairies or slaughterhouses in the North or South. Milk processing remains very localized and informal with a substantial part of production going directly to consumption as raw milk. It is also worth noting that the raw milk is often tainted with water from questionable sources and stored in subpar conditions, putting consumers’ health at great risk. At the same time there are examples of potential attractors such as the Lèt Agogo or Ferme Bon Visyon dairies that transform milk into pasteurized milk and yogurt, and seems to be interested in improving its supply chain based on shared value, including some level of supplier training and supply chain financing.

There are no credible channels for smallholder cattle to pass through a commercial slaughterhouse in the North or South. Almost all smallholder cattle are sold into local markets or to butchers (i.e., individuals

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FAO 2016
or SMEs) that slaughter the animal in or near the market and sell the meat immediately. There are no apparent hygienic norms or regulations being enforced at these markets. In the South, animals are sold in an open market that used to be aggregated and transported to other regions, especially Port-au-Prince. While access to Port-au-Prince end markets has been difficult, key informants indicated that up to 60% of beef still makes its way to the capital. There are a few exceptions such as a slaughterhouse in the North in Limonade, which one respondent indicated was working effectively. Respondents indicated that some farmers and butchers sell directly to restaurants/hotels in both the South and North RFZs. There were also a few examples of SMEs that have potential to grow, such as MS Boucherie in which the husband and wife owners are both agronomists. These examples indicate that while there are challenges, there are also opportunities to support/amplify emergent more structured, shared value supply chains.

Another important consideration that cattle respondents cited was transport. The combination of fuel costs, access to spare parts, and insecurity along many roads that link regions to Port-au-Prince have made transport difficult. While many respondents have just adapted to focus on local connections to sell cattle, there were some transport market actors that indicated an ability to adapt. For example, a cattle truck driver indicated that they cooperate with other drivers to ensure cost effective load management especially for back hauls. While it may not be possible for transporters and market actors to do much about inflation or insecurity, they could work, as in this example, to improve efficiencies along known transport routes.

4.2.2.1 CATTLE MARKET SYSTEM RESILIENCE

The MSRI Score for cattle is separated out between dairy (MSRI score of 1.8 out of 4) in figure 5 and cattle (MSRI score of 1.54 out of 4) in figure 6, but the foundations of both market systems are the same, so the scoring is a bit deceiving. For the most part farmers only own creole breeds or mixed creole breeds that are best suited to the environment and the current management practices. They manage the cattle the same regardless of whether they milk the cattle or sell them for meat. At the same time, because dairy is an important generator of daily cash, the few dairy-centric market actors tended to have a stronger commercial orientation. In this context, dairy scores related to commercial practices were a bit higher than cattle for meat. For example, dairy had a higher business strategy score.
Figure 5. Dairy MSRI

Dairy - Overall

- Structural Domains
- Behavioral Domains

- Cooperation (1.87)
- Rule of Law (2.17)
- Power (2.03)
- Diversity (1.92)
- Connectivity (2.10)
- Competition (1.03)
- Decision-making (1.63)
- Business Strategy (1.62)

Figure 6. Cattle MSRI

Cattle - Overall

- Structural Domains
- Behavioral Domains

- Cooperation (1.67)
- Rule of Law (2.17)
- Power (1.42)
- Diversity (1.38)
- Connectivity (1.78)
- Competition (1.00)
- Decision-making (1.63)
- Business Strategy (1.25)
Overall, the cattle market system is struggling to manage the recurrent shocks and stresses, as well as the most recent disruption that is changing political and market power dynamics.

- **Connectivity:** Connections are mostly localized with only a slight difference between the North and South in relation to the North having connection with the Dominican Republic. Cattle play an important role in social capital connections since it provides one of, if not the, most important ways in which household and family networks store wealth to save for shocks and stresses. As a result, cattle play an important foundational piece for managing risks within a family network. (Cattle MSRI 1.78; Dairy MSRI 2.1)

- **Diversity:** There is diversity in terms of some market channels, especially given farmers can sell into dairy or meat channels since there is no difference at the farm level in terms of animal husbandry. Dairy, in particular, has multiple channels within a region as they can sell to neighbors, aggregators, or processors. Cattle are mostly sold to aggregators or butchers. There is little diversity in terms of inputs, especially veterinary medicines and vaccines. (Cattle MSRI 1.38; Dairy MSRI 1.92)

- **Power:** Power is often wielded by aggregators to capture unfair margins, which can have a bigger effect on cattle for meat, since cattle are rarely sold unless there is pressure on the family to do so, which puts farmers at an even bigger disadvantage. The two dairy processors mentioned above do wield power in positive ways as indicated above, but they complain that when they try to act in a shared-value way, farmers take advantage by adulterating the milk. There are examples, especially with agrodealers and veterinarians, where they wield power to add value, but it is inconsistent. (Cattle MSRI 1.42; Dairy MSRI 2.03)

- **Rule of law:** Rule of law is similar for all livestock market systems – highly uncertain and at times predatory, especially in relation to basic licensing and registration processes. Dairy is the one market system that uses a generally accepted standard in terms of volumes sold. Live animals and meat are sold based on individual negotiations with no use of weights or measures. The tagging (i.e., using a ring as the tag) and registration programs for cattle provide a slightly better rule of law than for goats as it limits theft. (Cattle MSRI 2.17; Dairy MSRI 2.17)

- **Competition:** While dairy is perceived as less extractive, both cattle and dairy are scored low in terms of predatory or zero-sum competitive tactics. Competition is primarily between functions, as the systems are highly oriented toward winning transactions. For example, a dominant pattern is related to aggregators leveraging their power to win negotiations. (Cattle MSRI 1.00; Dairy MSRI 1.03)

- **Cooperation:** There were a few examples of good cooperation between farmers buying veterinary drugs and vaccines in bulk, but it was not a dominant pattern. A more dominant pattern was aggregators working together to set prices and acting in cartel-like ways. There are some examples of aggregators providing value chain finance to farmers in exchange for an agreement to sell animals to that aggregator, but these deals are also perceived as predatory, even though they provide farmers with an important source of financing for social issues/needs like education, health care, and other family needs. (Cattle MSRI 1.67; Dairy MSRI 1.87)

- **Decision making:** Government decision-making is essentially the same for all livestock market systems. Although there are examples of research and evidence gathering and analysis, there is little indication the evidence is used effectively to make decisions that add value. The one exception in cattle was that the government responded to concerns about theft by instituting a national process for tagging and registering cattle. While the process is fraught with concerns of
corruption, it has reduced theft and is perceived as generally positive. (Cattle MSRI 1.63; Dairy MSRI 1.63)

- **Business strategy**: For dairy-specific market actors, there are more indications that they are trying to operate their business on a value-addition basis, as indicated by how they engage/manage farmer-suppliers and the products they produce and sell. Past those examples, there is little difference between dairy and cattle business strategies, as farmers, butchers, aggregators, etc. are all very transactional, with a strong focus on how to maximize the margin they get during a transaction. Interestingly, commercial fodder production in the South is emerging faster than in the North, indicating a slightly more value-addition orientation compared to the North. (Cattle MSRI 1.25; Dairy MSRI 1.62)

### 4.2.3 POULTRY MARKET SYSTEM

The poultry value chain in Haiti is an important source of food and income for many households, especially in peri-urban areas where there is high demand for chicken and eggs. The system is primarily made up of small-scale producers who raise chickens for meat and eggs.

The poultry market system in Haiti includes the following actors, as illustrated in Figure 7 below:

- Small-scale producers who raise poultry for food and income.
- Village markets, regional markets, and urban markets where poultry is sold.
- Traders and intermediaries who facilitate transactions between buyers and sellers.
- Transporters who move live birds from farms to markets and between markets.
- Slaughterhouses and processing facilities that prepare birds for consumption.
- Feed suppliers who provide feed and other inputs to producers.
- Support services, including veterinary services, extension agents, and market information providers.

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14 Dagenais. 2015.
Figure 7. Poultry Ecosystem Map

Poultry Ecosystem Map

- **SUPPLY**
  - Frozen Chicken Importers (USA, Brasil, Canada)
  - Eggs Importers (formal / informal) (DR, USA)
  - Day-old chicks, feed, equipment, vet supply importers (DR, USA)
  - Local day-old chicks (AVIMAX, smaller producers in the south)

- **Demand**
  - Supermarkets, restaurants, hotels
  - Urban Markets
  - Peri-urban Markets
  - Rural markets

- **Vet services (Groupm aka Sante bet)**

- **Supporting functions**
  - Veterinary and extension services
  - Feed and fodder producers and suppliers
  - Transportation services (incl. cold chain)
  - Labor
  - Infrastructure: roads, stables, fenced land, public markets, etc.
  - Financial services (loans / grants / credit, M&As, etc.)

- **Market environment**: institutions, rules, norms & trends
- Rising fuel and energy prices
- Insecure and highly volatile environment
- Low degree of cooperatives and organization among farmers
- Absence of Government policy and support
- Quality standards across the value chain not enforced
The poultry market system in Haiti faces several structural challenges, including high production costs, limited access to finance and technical assistance, and the threat of avian influenza, Newcastle and other diseases. Additionally, the market is highly fragmented and informal, with many small-scale producers operating independently and lacking access to formal markets and value chains. Since the publication of the Government’s strategy in 2018, the poultry sector, as well as most agricultural and non-agricultural sectors, have undergone huge shocks and challenges. While all market systems have been affected by the Peyi Lok (“country on lock”) episodes with major roadblocks in and out of Port-au-Prince, poultry was particularly hard hit. Since a large majority of importers, distributors, producers, and suppliers are based in the capital, it meant that more remote provinces were getting increasingly isolated and cut off from basic poultry inputs and end markets.

Respondents reinforced this general perspective that the poultry market system is struggling and, in many ways, has become more fragile compared to the other livestock market systems. Because of the intensification of production (i.e., a flock of bird raised together) there is a greater reliance on commercial feed and veterinarian products and services for poultry as compared to cattle, goats or sheep, which makes poultry farmers/SMEs more vulnerable to shocks and stresses that disrupt or create uncertainty in market systems. For example, one respondent cited: “… that any delay in the acquisition of feed causes growth retardation when feed is not available.” For both the North and South, but especially the North, the instability has caused delays, increased uncertainty and increased prices of inputs for poultry feed, day-old-chicks, vet medicines/vaccines, etc. coming from the Dominican Republic. Even for the South, many respondents indicated that they get inputs from the Dominican Republic, but via Port-au-Prince. Respondents stated that many inputs from the US and Brazil pass through the Dominican Republic before being imported into Haiti. Now with Port-au-Prince essentially closed off, the South is having severe access challenges for imported/quality assured inputs. While cattle, goat and sheep farmers can find ways to manage, poultry farmers often cannot. For example, one respondent indicated that over a two-day period they lost more than 300 chickens. They stated that “… there is no feed-meal in the area and feed is no longer available. In order to find feed, we have to arrange to buy ingredients and for the premixes that have to come from outside, we have to deposit money and wait for availability. A situation that does not allow us to progress properly.” The situation has gotten bad enough that many of the larger commercial actors have closed. For example, probably the largest recent investors in poultry production and processing, Haiti Broilers, that had entered the market shortly after the 2010 earthquake, has stopped operations and pulled out of Haiti entirely due to the political instability and insecurity. There was also Les Moulins d’Haiti that produced feed, but also shut down due to the insecurity and market volatility.

While maintaining production of birds is difficult, for a few firms/farmers that can secure cost effective access to inputs, there are opportunities. One respondent indicated that she collects and recovers used cartons to trade eggs and is able to sell at the local market whatever she can produce. Another respondent indicated that they have had to adapt, but they are now able to avoid large losses by changing how they manage production. In the South, EDMAX Production and Distribution, has shifted to selling more sasso hens that are hardier, as a way to manage the challenges of reduced access to veterinary drugs and commercial feed. So, while there are opportunities, the ability of market actors to take advantage of opportunities is difficult. For example, Renette Lordé responded that they would like to grow, but they don’t have the means, and with the current instability they have become particularly uncomfortable taking on a loan.

4.2.3.1 POULTRY MARKET SYSTEM RESILIENCE

Poultry is similar to dairy in that they are both very important for generating daily cash flows for farmers. However, before the recent political issues, poultry was much more commercialized compared to the
other livestock market systems. There were larger commercial market actors that were influencing the market system in positive ways. Since the challenges, most of those commercial firms have stopped functioning, pushing the commercial elements of the poultry system to the brink. There remains a village or country chicken segment to the poultry market system that has always been a source of resilience for many families and remains so today. The overall MSRI score for poultry is 1.54 out of 4.

Figure 8. Poultry MSRI

- **Connectivity**: Similar to cattle, the main difference between North and South is the connections to the Dominican Republic. The Dominican connections are proving important since day-old-chicks and veterinary medicines/vaccines continue to flow, which is giving many smallholder farmers a lifeline to maintain quality assured poultry production (i.e., not country chickens). The general difficulties in transport and connectivity have had an outsized effect on commercial poultry channels as it is more susceptible to disruptions and volatility. In contrast, the country chicken channel has been less affected by connectivity issues. (MSRI 1.58)

- **Diversity**: The poultry market channels may be the most diverse, since chickens can be sold to neighbors, aggregators/Madan Saras, or restaurants/hotels. However, when you separate country chickens from commercial poultry there is less diversity for each. Country chickens are primarily sold within a community, and commercial poultry are primarily sold at local/regional markets. Inputs including veterinary drugs, vaccines, feed and day-old-chicks have gotten less diverse and can be hard to find. (MSRI 1.83)

- **Power**: Probably due to the fast-moving nature of chicken sales, meaning it is generally easy to sell and prices are generally stable, power is less likely to be wielded to capture unfair margins. At the same time, all the commercial power nodes that were exerting influence in a positive way
have gone, so it is unclear how long the commercial channels of poultry that smallholders rely on for income generation can continue to function without local day-old chicken and feed production. (MSRI 2.17)

- **Rule of law:** While the general rule of law is the same for poultry as with the other market systems, the government has tended to be more hands-off with poultry, allowing commercial actors to influence how the system was evolving. As poultry has struggled, the commercial actors that had influence around the rules of the game have closed leaving the commercial segment more chaotic. The country chicken segment is very localized and operates within communal norms that provide some sense of a rule of law. (MSRI 1.00)

- **Competition:** The general competitive environment is perceived as extractive, but before the chaos in Port-au-Prince, the commercial poultry segment seemed to operate with less extractive pressures. This is mostly likely due to the fast-moving nature of poultry sales, making it less useful to engage in extractive negotiating when there are many transactions. (MSRI 0.93)

- **Cooperation:** Commercial poultry tended to function in ways that were less extractive than other market systems, but after the chaos, commercial poultry has failed to cooperate in ways to weather the challenges. Country chicken operates in very localized contexts, primarily between neighbors and community members that know each other, which suggests a level of informal cooperation. (MSRI 1.67)

- **Decision making:** Since commercial poultry evolved with little Government involvement, government has invested little in gathering data or analyzing poultry. At the same time, the effect has been minimal since there is little indication the government uses evidence in any effective way to improve competitiveness, inclusivity, and resilience. (MSRI 1.67)

- **Business strategy:** Like with other domains, as the commercial segment of poultry struggled, patterns related to business strategies also reverted to more short-term survival mode. The country chicken segment was also short-term and transaction oriented, so the recent shocks and stresses have had little effect on how those market actors operate. (MSRI 1.47)

### 4.2.4 GOAT/SHEEP MARKET SYSTEM

The goat market system in Haiti is an important component of the livestock sector. Goats are raised by small-scale producers throughout the country, and their meat is a key source of protein for many Haitians. Furthermore, they represent an export value, with MARDNR estimating that 50,000 goats are exported annually to the Dominican Republic, representing an approximate $2,000,000 in export value.16

As illustrated in Figure 9 below, the goat market system in Haiti is primarily informal. Some of the key market actors for the goat/sheep market system include:

- Small-scale producers who raise goats/sheep as a store of value and for income.
- Village markets, regional markets, and urban markets where goats are sold.
- Traders and intermediaries who facilitate transactions between buyers and sellers.
- Transporters who move goats/sheep from farms to markets and between markets.
- Butchers and slaughterhouses that prepare goat/sheep meat for consumption
- Support services, including veterinary services, extension agents, and market information

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16 MARNDR. 2011.
providers.

Most transactions take place at local markets or through informal networks of buyers and sellers, often linked to specific Madan Saras. Respondents also indicated that they only sell a goat or a few goats when a specific need arises such as improving their house, sending a family abroad, paying for school fees, etc., which indicates that goats are perceived by some communities/households as a savings mechanism, as opposed to a commercial enterprise that can generate wealth. In addition, there are concerns around food safety and hygiene, as (open air) informal meat processing, transportation and handling practices increases the risk of contamination and foodborne illness.\(^\text{17}\)

\(^\text{17}\) DevLearn. 2022.
In contrast, there are also some formal channels for goat meat sales, including supermarkets and restaurants that cater to a more urban, affluent clientele. Haiti exports goat and kid skins, notably to the United States, but recent statistics seem difficult to find. Respondents indicate that recent insecurity has slowed goat sales through these formal channels. Respondents indicated that informal channels that supplied goats into Port-au-Prince, including during periods of high demand such as during carnival celebrations, end of year celebrations or religious festivals, are also struggling with the increased levels of insecurity, which is reducing the number of buyers from Port-au-Prince, which, in turn, is simultaneously driving down prices and increasing the costs of inputs. For the North, informal exports to the Dominican

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18 https://tradingeconomics.com/haiti/exports/united-states/goat-kidskin-leather-no-hair
Republic have been an important channel that has remained open providing a source of resilience for goat livestock market actors. Although official statistics are unclear, it is estimated that 20 to 50 thousand goats flow through this informal export channel.

In addition to the disruptions of market channels tied to Port-au-Prince, respondents indicated that the recent drought has substantially reduced the level of fodder/pasture available, which is weakening animals and further reducing margins. Respondents also indicated that predation from dogs in combination with an increased level of theft is forcing farmers to invest in security by hiring guards and/or building more secure physical infrastructure to house their goats.

An interesting and relatively new opportunity according to one respondent is goat milk. In Cerca Carvajale in the Southern region a private company, Kabrit Kiskeya, is focusing on the production and sale of pasteurized goat milk, as well as processing milk into yogurt and cheese. They started milk production in 2022 with 10 goats and they are expecting to grow to 44 goats, including 4 breeding goats. The respondent indicated that some of their equipment is in Port-au-Prince, and it was unclear when they might be able to get the equipment in order to be fully operational. They have already built a 144 square meter shed on a fenced-off plot of land to house the goats, and they plan to produce their own fodder on their remaining land. There is also Relais Jean, a butcher from the South that has started processing goat meat as a way to manage the lack of cold storage. They are producing value added end products like stews and salted meats for sale. Again, even though the contexts are difficult, and most respondents are struggling, there are opportunities to support and amplify market actor behaviors that demonstrate a shared-value, growth orientation.

For the sheep market system, aside from some statistics, there is very little data or information available on sheep. Interestingly, sheep are not explicitly mentioned in any of the Ministry of Agriculture (MARNDR) strategic or policy documents. Indications are that sheep production is primarily in the South, but sheep production does not seem important or growing. Since there is no wool transformation industry in Haiti, it seems likely that they are mainly raised for meat, on a small scale and mainly for own consumption and / or for the local markets. According to one respondent, “…people do not eat sheep meat, and this is considered much more of a myth that tends to become cultural because people think that if you eat sheep meat and someone surprises you, you will get vitiligo. That is why many Haitians refuse to eat mutton when they know it is mutton.”
4.2.4.1 GOAT/SHEEP MARKET SYSTEM RESILIENCE

The overall MSRI score for the goat and sheep categories is 1.6 out of 4.

Figure 10. Goats/Sheep MSRI

- **Connectivity**: The goat/sheep market system operates very similar to cattle meat market system in that connectivity is very similar, including how the North has more connections with the Dominican Republic. The connections with the Dominican Republic are more important to the goat/sheep market system as it also provides an informal, but important end market. (MSRI 1.75)

- **Diversity**: The goat/sheep market system, like poultry, has more diversity in market channels that include neighbors, aggregators, some restaurants/hotels and the Dominican Republic (i.e., for Northern farmers/aggregators). Just like cattle, there is very little diversity in veterinary services or products. (MSRI 1.60)

- **Power**: Power dynamics are better in the goat/sheep market system than in cattle for the similar reasons as with poultry, since goats sell on a more regular basis, allowing for a lot more volume of sale and making the wielding of power to maximize a margin less useful. (MSRI 1.93)

- **Rule of law**: There is very little difference between the cattle meat and goats/sheep market systems in terms of rule of law, but there are two exceptions. The first is that the Dominican Republic buys by weight. The second is that goats/sheep do not have a tag registration process, so theft is perceived as on the rise. (MSRI 2.0)

- **Competition**: There is very little difference between goats/sheep and cattle in terms of competition. Aggregators and Madan Saras are extractive in how they negotiate and engage
farmers. There is often price fixing and other zero-sum negotiating tactics that are used. However, farmers have more options since they can sell to neighbors or informal butchers, limiting the extractive negotiating tactics. (MSRI 1.00)

- **Cooperation**: Unlike some level of value chain finance in the cattle market system, goat/sheep market actors do not provide positive cooperation across functions. There is also very little indication of farmers cooperating with the exception of some farmers cooperating around vaccine access. Aggregators and Madan Saras do cooperate, but mostly in cartel-like ways to fix prices. (MSRI 1.67)

- **Decision making**: Similar to rule of law, decision-making by the government indicates some level of investment in data gathering and analysis, but with little influence on improving the enabling environment. The one important difference is the tags (i.e., rings)/registration of cattle. (MSRI 1.63)

- **Business strategy**: Goats/sheep market actors operate in ways that are similar to cattle market actors in that they provide a store of value and a source of cash flow. However, there is a slight difference in that goats/sheep are more important as a source of cash, as opposed to cattle which is more important as a store of value. At the same time, goats/sheep are sold mostly in response to a need. As a result, the overall business strategy is short-term and transactional. One important difference is that farmers will invest more in cattle as a response to disease and sickness. (MSRI 1.18)

5. RECOMMENDATIONS

The research indicated that communities, market actors, and market systems have evolved strategies and tactics to manage uncertainty through no-risk/no-invest livelihood strategies and tactics. These coping strategies are not overly reliant on informal community coping mechanisms, Government social safety net services, or donor programs, but do seem to be reliant on market mechanisms. The research also found that to a great degree, and especially in the South, those strategies and tactics evolved in a landscape where power (i.e., both political and market) was centralized in Port-au-Prince. As a result, most inputs and end markets were in or linked via Port-au-Prince. Given the reliance on market mechanisms and the reliance of many market mechanisms on Port-au-Prince, as Port-au-Prince has fallen into socio-economic turmoil, most households, communities, market actors and market systems are struggling to adapt. In the North, where connections to the Dominican Republic provided some level of diversity in terms of access to input and end markets, they have fared better than the South.

5.1 STAKEHOLDER ENGAGEMENT

The research found that the disruptions related to the breaking down of Port-au-Prince’s market power, could provide an important opportunity to catalyze a more diversified foundation for livestock market systems in the North and South RFZs. The research also found that since market systems are in many ways foundational to household and community resilience, any interventions would need to consider likely trade-offs, including the roles different animals play from a resilience/risk management perspective. In practice, a priority would be to leverage the Port-au-Prince disruptions to catalyze a new sense of stability based on a more diversified set of input and output connections. Importantly, according to the research, the priority for households and most market actors is ensuring reliable, diversified income streams. Traditional value chain approaches have tended to devalue the importance of risk management strategies (which do not align with growth and value addition priorities), especially in the contexts of improving productivity (i.e., intensification). In this context, PARE should take a phased approach, focusing first on
stakeholder engagement processes (i.e., various methods to engage a group of stakeholders) that would allow various stakeholders to deal with joint pain points. As stakeholder processes build more clear and diversified pathways for livestock market systems to stabilize (Objectives 1 & 2), PARE can then start to amplify emergent attractors related to value addition and inclusive growth (Objectives 2 & 3).

5.1.1 STAKEHOLDER PROCESSES TO ADDRESS KEY JOINT CHALLENGES

The research identified a wide range of challenges that are multi-dimensional with multiple stakeholder groups having a stake in how the issues are addressed. A major gap that emerged from the research is how such issues are managed, addressed, discussed, with few stakeholders having a voice and few solutions emerging through a consensus building process. The research also indicated that there are opportunities for PARE to catalyze an improved ability to leverage pain-points to create new and stronger connections as part of a process to address issues. More specifically, PARE where possible should work with local market actors/organizations to serve in convening and facilitation capacities so that stakeholder processes can become a regular method for managing challenges and issues, such as:

- Operations of spot or open market (Objective 3.1)
- Veterinary inputs (Objectives 2.3 & 3.2)
- Pasture management for cattle and goats/sheep (Objectives 1.1 & 2.2)
- Butcheries and slaughterhouses (Objectives 3.1 & 3.2)
- Day-old chicks and feed inputs for Poultry (Objectives 2.1 & 2.2)
- Connections between North and South (Objectives 1.2 & 3.1)
- Dominican Republic links and trade flows (All objectives)
- Finance Services (Objective 2.4)
- Water access and usage (Objectives 1.1, 1.2, 3.2)
- Energy options – solar, hydro, biodigesters, etc. (Objective 1.1)

Spot Market Performance

Open or spot markets are a self-organized way in which large numbers of market actors engage in a process that aggregates agriculture products onward sale, often to a wide range of sales channels. A key characteristic is that open/spot markets are not defined or influenced by a specific firm like directed or structured supply chains with a lead firm. Unlike structured supply chains, the rules of open markets are highly influenced by outside forces like social and political norms and events. The research indicated that there is some level of cartel behavior via Madame Saras in some markets. The research also indicated that while there are incidences of extractive business behaviors, there were also indications that market actors have created valued buying and selling relationships suggesting there are real opportunities for catalyzing change in how spot markets operate. The research found that the vast majority of smallholders, regardless of livestock, sell into open/spot market supply chains. So, how open/spot markets function is an important lever point for catalyzing improvements in market systems competitiveness, inclusivity and resilience. (Objectives 1.2, 2.4, 3.1, 3.2) Guidance for engaging spot market actors includes the following three tactical intervention areas:

1. **Stakeholder**

   The most important and likely most common intervention area is to work with a wider set of stakeholders that includes local government, farmers, traders, transporters, lead firms, etc. around a participatory, co-creation process to map out current challenges and costs, as well as opportunities around the operations of the spot market. Through this process, PARE can help stakeholders identify opportunities to catalyze change in a positive way that aligns with its systemic change goals (i.e., bridging

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20 “Interactive Stakeholder Dialogues”, Vikāra Institute, April 2020
capital, competitiveness, inclusivity, and resilience). More specifically, PARE would want to guide the process to include a shift in rules/norms in how the market is operated related to thinking of the spot market as a service, and in that context improve key elements (i.e., cleanliness, security, transport, weights/measure, standard rules/code of conduct, storage, etc.), as well as additional value addition services (i.e., financial, food, sanitary, hotel, etc.) for all parties to increase the overall value proposition of the spot market.

2. **Peer to peer**
   — The second intervention is working with trader clusters, such as groups of aggregators and Madan Sarhahs, where there are regional opportunities to develop localized branded products. Where trader clusters show real interest, PARE could support them to develop branded products, which could include investment in some processing capacity. PARE would help traders see the opportunity of engaging farmers differently as a way to generate solid and long-lasting returns on localized branded products. PARE could then support the traders as they shift their tactics in managing farmers to ensure farmers meet their requirements in line with the brand, which requires creating win-win ways to transact with farmers. (Objective 1.1)

3. **Alternative service** — The third intervention area is to work with either lead firms or local stakeholders to develop an alternative open/spot market as if it is an alternative service for traders/farmers. For livestock, the emergence of auction-based mechanisms/spot markets are common. For PARE to support such an alternative to form, it would need to have a good understanding of the political economy around the established open/spot markets so any proposed alternative fits the local contexts. (Objective 2.4)

**Veterinary inputs**
Respondents, including both farmers and veterinary services firms, identified access to vaccines and medicines as having a major impact across all livestock types. While respondents in the North indicated that they have been able to access some vaccines and drugs through their connections with Dominican Republic exporters, the high levels of informality and transactional orientation means scaling has been difficult. At the same time, in both the South and North, access to veterinary inputs and services was cited as thin, even though there were private sector service provider respondents that indicated a strong interest in customer-oriented growth. While most, if not all, respondents indicated access was a pain point, there is very little indication of any joint efforts to address the near, medium and longer-term challenges to expanding the veterinary inputs/services markets. Of particular importance will be how to improve near term access to quality assured vaccines and medicines, as well as how veterinary service providers can innovate different more cost-effective models for livestock farmers. At present, veterinary service provider respondents indicated they provide services on an individual paid for service model, which can be expensive, especially for rural smallholder communities. Alternative models like herd health/aggregated service and community-based health agent models (i.e., commercial models tied to private veterinary market actors) might resonate. Given the various different respondents that raised this issue, stakeholder processes around this point would be important, including connecting Northern and Southern veterinary service providers. (Objectives 2.2, 2.3, 3.1, 3.2)

**Pasture management for cattle and goats/sheep**
Respondents indicated that the combination of the fragility in Port-au-Prince falling, climate change, and no-risk/no-investment livelihood strategies, have made access to pastureland and fodder/feed for cattle and goats/sheep a serious concern. The combination of stresses has made access to quality pasture very

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22 “Peer-to-Peer Business Accelerator for Agricultural SMEs”, Bangladesh Agricultural Value Chains Project, Summary of Key Outcomes Power Point, March 2017
difficult, but without any alternative ways to buy cost-effective sources of nutrition, rates of morbidity and mortality are increasing in cattle/goats/sheep. According to respondents, the stress related to accessing feed/fodder is catalyzing negative behavior responses that include stealing private pasture, disputes with crop farmers that complain about livestock farmers letting their animals graze on crops, disputes on access to pasture that does not have clear ownership, etc. Through stakeholder processes, PARE could support local conveners to engage market actors about their various perceptions and perspectives, and then identify potential pathways to improve access to food sources for cattle and goats/sheep. (Objective 1.1, 1.2, 2.2, 3.1)

**Butcheries and slaughterhouses**  
Respondents cited the situation in Port-au-Prince as having an effect on commercial slaughterhouses and end markets that demand quality assured meat. As a result, livestock have increasingly been going through informal butcheries that do not maintain any hygienic standards. Respondents indicated that the stresses have caused a shift backwards toward informal meat processing that is dangerous. Respondents indicated that commercial, growth-oriented supply chains have struggled, with many even disappearing, resulting in a concerning increase in volumes flowing through informal slaughtering processing. Although informal butcheries are an important element in the way many livestock farmers manage risks, improving how such processes operate would be important. There are also concerns related to how inflation is reducing the purchasing power of many consumers. Given the multiple perspectives and incentives at play, a stakeholder process to share thoughts, risks, considerations, etc. to improve current and potentially catalyze new, quality assured, meat processing functions would be useful. (Objectives 3.1, 3.2)

**Day-old chicks and feed inputs for poultry**  
According to respondents, the poultry industry has had a more difficult time coping with the disruptions of Port-au-Prince as the city is a key node for quality assured day-old chick and feed, as well as middle and high-income end market channels. Respondents indicated that because of the intensification of poultry production, even smallholder producers were more susceptible to stresses that affect quality assured inputs. While some respondents in the North indicated that they have been able to access some inputs, the transactional nature/informal connection have meant quality assurance was questionable. Respondents indicated that the near, medium, and longer-term viability of poultry will remain in question until access to quality-assured day-old chicks and feed can be made more robust. A variety of stakeholders stated their interest in sorting out access, but they also represent differing perspectives and incentives. The immediate pressure to improve the situation indicates a stakeholder process to ensure all voices have a say, as well as work through various perspectives to come up with potential solutions would be important. (Objectives 1.2, 2.1, 2.2, 3.1)

**Country Chicken**  
While the country chicken system is highly informal and adds another resilience element for many farmer households, there are few levers to improve how it functions in the near to medium term since, for the most part, production and sales happen within a community. There are examples of efforts to brand country chicken and sell into urban markets via more formal channels, but there was no indication that such a channel is starting to form from the research. Given the struggles of the quality assured chicken system, there might be opportunities to leverage the taste preferences that many Haitians have for country chickens. A stakeholder process to gather interested stakeholders around this opportunity could be a useful exploratory starting point. (Objectives 1.2, 3.1, 3.2)

**Dairy**  
Respondents indicated that the dairy market system has, in many ways, shifted back to more of an informal livelihood effort. Although there are some indications that market actors like Let a Go Go dairy and Ferme Bon Visyon are poised to lead a revitalization, the dominant pattern from respondents was that they are...
struggling with all the covariant challenges like access to vet services, water, energy, and feed. Also, dairy requires refrigeration to move beyond informal raw milk channels, which in turn requires effective cooperation along the supply chain, especially farmer to trader to processor functions. Having the whole-system-in-the-room might be a useful stakeholder methodology so that all the input, production, aggregation and processing issues/constraints/opportunities can be voiced and lead to constructive discussions around who could cooperate in various geographies, as well as across geographies. (Objectives 1.1, 3.1, 3.2)

**Connections between North and South**
An important finding of the study is that centralization around Port-au-Prince is a source of fragility that has resulted in multiple different knock-on effects in the North and South. The fact that the North has fared better because of its connections to the Dominican Republic is an opportunity for the South. The near, medium and longer-term competitiveness, inclusivity and resilience of the overall livestock system will be dependent on the emergence of networks and connections that are not dependent on Port-au-Prince. While it is important for the South to establish its own direct connections to Dominican Republic market actors, it may be more immediately important to improve and expand connections between the North and South to strengthen information-sharing across the Haitian livestock market system. Input, processing, end market, supporting services, academia, etc. connections would all be important. PARE could engage via a whole-systems-in-the-room methodology, or through a series of stakeholder processes that are grounded by specific pain points to catalyze improved and expanded connections. (Objectives 1.2, 3.1)

**Dominican Republic links and trade flow**
Respondents in the North cited access to the Dominican Republic as central to their ability to manage the current set of shocks and stresses. Respondents in the North indicated that the connections are mostly informal and transactional, which have been helpful, but not sufficient. Improving the near-term connections and flows between the Dominican Republic and regional livestock market system actors, especially in the North, are important to further stabilize and potentially set the foundations for longer-term growth. While the near-term opportunities are clearer in the North, it is critically important that, maybe initially via the North, the South establishes access to inputs and end markets that do not go through Port-au-Prince. There are many challenges, including political elements, that strongly suggest that stakeholder processes would be very useful to deal with near, medium and longer-term issues as they ensure more voices are heard and political interests could emerge to push improvements in formal cross-border processes. (All objectives)

**Financial Services**
Livestock respondents indicated that access to working capital was critically important. Interestingly, while not a dominant pattern, some respondents indicated they did not want to engage banks to access working capital. Respondents indicated that in a limited set of contexts, they are providing value chain or customer credit. Financial service provider respondents indicated a higher level of interaction than livestock respondents indicated, stating that they continue to lend and are actively engaged with agriculture. The perception gap combined with the clear need for working capital and other types of finance suggests that gathering stakeholders to work through the various perspectives and incentives that include banks, value chain finance, savings groups, alternative financial service providers, etc. would be very helpful. Again, a whole system in a room could be appropriate, but it also might work better to hold a range of stakeholder processes that are grounded in specific pain-points. (Objectives 2.4, 3.1)

**Water access and usage in response to drought management**
Respondents identified access to water, especially during times of drought as important. Cattle, poultry, goats, and sheep farmers and market actors indicated that challenges accessing water are affecting animal
morbidity and mortality rates. Although dairy farmers seemed to be the most impacted, all livestock farmers indicated that their access to water has compounded their challenges pushing some of them to the brink. Access to water can be complex with rights, legal, communal, etc. crosswinds that can derail efforts to increase access. As a result, stakeholder processes can be effective at aligning interests to move forward with various pathways to increase access to water for livestock farmers. (Objectives 1.1, 2.2, 3.2)

Energy and fuel
Respondents indicated that access to cost effective energy has been and continues to be a confounding factor. If they have resources, some respondents are shifting to solar, which is only a viable option if they can invest in expensive batteries. Most respondents manage via generators, but the volatility of fuel prices has made this option less and less attractive as a long-term solution. Respondents indicated that energy issues are affecting inputs like vaccines and medicines, as well as fresh meat, dairy, etc. that all need a cold chain/storage. The added stress of having to move or sell inventory quickly is compounding other uncertainties making the ability of households, market actors and market systems less resilient and less able to generate growth. Stakeholder processes to explore various options, connections, and technologies that could emerge to help improve access to cost effective energy sources. (All objectives)

In practice, stakeholder processes are most often a start of a process that is likely to evolve in multiple ways. So, the aim of stakeholder processes is not to get a single solution that all stakeholders will cooperate around. Rather, the main aim is to raise voices, share different perspectives, identify initial bridging capital, and uncover individual/combinations of market actors that are motivated to work on solutions. Even stakeholder processes that do not result in clearly defined next steps are useful at uncovering joint interests that could, over time, lead to more discussions and eventually effective cooperation and joint action on solutions. Especially in the context of complex and high-risk environments like Haiti, stakeholder processes provide a good way of ensuring any emergent solutions fit the local contexts and consider the potential trade-offs.

5.2 ENTRY POINTS FOR LONGER TERM COMPETITIVENESS, INCLUSIVITY AND RESILIENCE

While the current conditions are not stable enough to bring about a substantial change in how the market system operates, the reliance of the market systems as a source of household resilience is relatively unique in the context of such a chaotic environment. Given the reliance on market systems to generate cashflow as a source of household resilience, there are indications that changes could emerge if they improve how market actors manage their various risks, especially in the relation to household/family risks. It is in this context that it is important to initiate change via stakeholder processes to focus on how stakeholders engage and rely on market mechanisms. At the same time, such stakeholder processes should catalyze multiple opportunities that signal elements of the livestock market system(s) are ready to move beyond a stabilizing phase to more of a growth or value addition-oriented phase. The research identified multiple forces and factors that support the emergence of attractors related to inclusive growth. Given the short-term, transactional nature of livestock market systems in Haiti, it would be expected that extractive behaviors emerge as pressures push market actors to capture margins that can then be used to support household or family needs. At the same time, there were also indications that some actors have or are trying to apply a growth and value addition orientation for their businesses. There were veterinarians, breeders, processors, and other actors that indicated a strong orientation toward growth and value addition that could emerge as important role models or nodes of growth in both the North and South.

As these attractors emerge, or as market actors (or groups of market actors) emerge that demonstrate attractive behaviors, PARE should pivot to provide support. It would be important that PARE not focus on single businesses in this context but focus on the demonstrated behaviors of market actors. Central
to systemic change is supporting initial firms to catalyze other firms into inclusive growth, and then the system shifts to favor inclusive growth. In this context, it would be helpful for PARE to frame key systemic change objectives based on where and how trusted, shared valued commercial relationships emerge and thrive, in particular, supply chain, retail distribution, and support services relationships. (Objective 3.2)

5.2.1 SUPPLY CHAIN MARKET SYSTEMS

While most smallholders and SMEs work through open markets, the emergence of more structured or directed channels is critically important for competitiveness, inclusivity and resilience purposes. Whether called outgrower schemes, contract farming models, structured supply chains or directed value chains, the key aspects are an increased level of stability in the relationships/alliances along the supply chain. The increased levels of stability, most often, comes from a lead firm that asserts their influence on their supply chain through formalized contracts/agreement or informal incentives (i.e., social capital, financial rewards, etc.) that allow them to project rules of participation. Through the rules defined by the lead firm, which are primarily around quality, quantity transactional details (i.e., timing, location, prices, etc.) and adherence to agreements (i.e., following the rules), the relational foundation can be perceived as more stable or structured (i.e., consistent with clear rules that have transparent rewards and sanctions). It is this clarity and consistency that provides the foundation on which trusted, commercial relationships are more likely to emerge, especially if the strategies and tactics are grounded in value-addition and shared-value.

Respondents indicated that such directed channels are almost non-existent. Lêt Agogo and Ferme Bon Visyion dairies are two examples that seem to be still operational, but respondents indicated that the current chaos in Port-au-Prince slowed or stopped most efforts to form more structured channels as they primarily fed Port-au-Prince end markets. Given the uncertainty around Port-au-Prince end markets, the near to medium term opportunities are within the North and South urban markets, as well as the Dominican Republic. Of course, the urban markets in the North and South are being affected by inflation that is eroding their purchasing power, but respondents indicated they continue to find opportunities to sell to hotels, restaurants, etc. Regional markets that would require a port might be possible but are likely a longer-term opportunity that would align with Port-au-Prince becoming more stable. In this context, there were some potential entry points that PARE could engage leading into and out of the stakeholder processes:

Dairy
Dairy was the one market system that had the best examples of lead firms trying to engage and manage their supply chain. Lêt Agogo actively engages its suppliers, but indications are that it is not as commercially grounded as it needs to be and may be over reliant on donor support. There is also another dairy, Ferme Bon Visyion, that is also actively working with their suppliers. Dairy will also likely support the emergence of diversified supply chain models that could include integrated cooperative models that aggregate and market dairy products, lead firm processor models like the Lêt Agogo model, and more mixed models where the aggregation/collection hubs are owned by SMEs. Some key challenges to commercialization will be some level of specialization/intensification, energy/cold chain, veterinary services, and shifting the market to prefer pasteurized milk. Experience in other countries has shown that all these challenges are manageable but could be slow while households continue to rely on dairy as an important part of a diversified risk management strategy that requires cattle to fill multiple resilience functions. (All objectives)

Cattle
As indicated throughout the report, cattle for meat and dairy are essentially the same market system at this point, in terms of animal health/husbandry. How and when separation will start to happen is unclear, but there are some emergent opportunities related to slaughterhouse/butcheries (Objectives 3.1, 3.2). There are indications that the very few currently operational slaughterhouses do not engage smallholders in any real way. But there are end markets that demand more quality assured meat, including some nascent
processors of sausages. Restaurants, hotels, supermarkets, etc. could all provide end market opportunities for a butcher or slaughterhouse that has more direct control of their supply chain. For example, respondents indicated that butchers have shown a clearer commercial orientation and might be open to adapting their business model to be more formal and include more structured and professional slaughtering facilities. In other countries, as and when such types of lead firm models emerge, they also tend to catalyze feedlot services and increase demand for commercial fodder. Although it is more likely that the initial lead firm supply chains would feed into niche/higher value end markets (i.e., to cover the costs of increased supplier management), the emergence of some examples of shared value supply chain management in cattle would be a critical early step toward systemic change.

**Goats/Sheep**

Goats/sheep are likely to follow a very similar process as cattle. For example, there was one cited example of a butcher preparing stews for sale locally. While the driving force of making the value-added product was to preserve excess meat since they did not have refrigeration, the start of such a value-addition process could signal a willingness to grow and engage smallholders differently. Goats have greater potential for exports to the Dominican Republic, especially since there is already an informal channel that could be leveraged. Respondents also indicated that regional exports are a possibility as many countries import goat meat. (Objectives 3.1, 3.2)

**Poultry**

Poultry is probably the one market system that is the least likely to be organized around a lead firm model. This is because of the nature of poultry end markets being primarily localized, and the emergence of powerful interests importing frozen chicken that make the cost/benefit of engaging smallholders more difficult. At the same time, when more commercial productions of eggs and chicken begin to rebound, outgrower models to supplement supply could form. It is important to note that historically when poultry market systems emerge with the dominant commercial players within the production and processing functions, smallholder poultry production tends to retrench as scale efficiencies push them out.

**Fattening/finishing services**

Another set of commercial support services that tend to emerge only after a critical mass of farmers start to shift to be more growth or commercially oriented, are feedlots or finishing services. Typically, such services are integrated into supply chains, especially supply chains that feed into end markets that will value the additional costs. These services can and have emerged in similar contexts to Haiti, but those examples required high levels of trust with farmers and a clear niche market that will pay for value-added animals. More common is that fattening/finishing services emerge in conjunction with a more commercial livestock system. At present, Haiti does not have robust commercial cattle or goat systems operating according to respondents. Regardless, PARE should be tracking when and where market signals indicate fattening/finishing services are starting to emerge. (Objective 3.1)

### 5.2.2 RETAIL DISTRIBUTION MARKET SYSTEMS

Respondents indicated that while they did have good relations with some vets and agrodealers, the overall value addition from the inputs system is limited. The research confirmed that most inputs were imported, often flowing through various hands before being purchased. As a result, the veterinary and input retail system has become more haphazard since Port-au-Prince has become disconnected. An additional insight from the research was that smallholders are hesitant to invest/purchase inputs unless they know they are needed. Taken as a whole, the system seems organized as a trade-based system that is oriented around near-term trading/transaction with little investment or plans for growing or developing a large and loyal smallholder customer base. The current systems have a very limited ability to effectively identify, prioritize and allocate resources in response to current and emerging needs/wants of smallholder farmers.
While the stakeholder processes related to veterinary vaccines and medicines should provide some important near-term opportunities to improve access, the processes should also uncover a few opportunities to work more systemically with high potential market actors:

**Veterinary and Agrodealer Networks**

It will be important for the overall livestock market system that veterinary services are integrated into the general input retail system (i.e., as opposed to only being provided by specialist firms). For example, many if not most farmer respondents indicated they own multiple types of livestock, as well as produce crops to diversify risks. These insights further suggest that looking at the wider input retail distribution system would be critical to scaling up access to quality assured input for smallholders, as substantial efficiencies can emerge as retailers provide a wider range of input products. There is already an informal structure in place that could be leveraged relatively quickly following the stakeholder processes that includes connections between vet agents and veterinary/agrodealer SMEs. This structure could provide the foundations for a commercial village agent distribution model. Experience from other countries indicate that if agrodealers/veterinarians, with support from PARE, create more formal agreements with the vet agents to educate, market and bulk sell inputs for smallholders, commercial returns could be substantial. An important lesson from experience is that to gain scale efficiencies and create a platform for ongoing expansion, the agrodealer/veterinarians need to integrate the vet agents into their business. Another key for this model to work in Haiti would be creating and improving connections to vet medicines and products. While the stakeholder processes should identify opportunities to improve how vet and agrodealers buy their supplies, finding alternative sources from the Dominican Republic or the region that could connect to groups of vets/agrodealers is another option that could be explored. (Objectives 2.1, 2.2, 2.3, 2.4, 3.1)

**Day Old Chicks and Feed**

Specifically for poultry, and especially related to smallholder poultry farmers, it is critical to reinvigorate local access to day-old chicks. As indicated in the supply chain section above, historically poultry systems either emerge with power held at the production/processing functions or at the day-old chick function. When power forms around day-old chick production and sales, smallholders can often thrive as they provide a diffused and effective way to raise day-old chicks that quickly expands the end market for chicken into increasingly more rural areas. In addition, in Haiti the nature of poultry as a faster moving commercial product that is highly localized suggests that a day-old-chick lead firm model selling to smallholders could work very well commercially. In this context, leveraging day-old-chick production and sales to push stronger customer engagement could form the foundations of a scalable model that could reach many smallholders. Access to feed is also essential for smallholder poultry to rebound. Marketing quality assured feed to poultry farmers will likely require alliance building between day-old chick, feed producers (i.e., including Dominican production) and feed retailers to bundle them, reducing the perceived risks of smallholders jumping back into poultry production. For example, revitalizing models that bundle day-old-chicks with feed and basic medicines for a full production cycle could work well once some level of stability emerges. (Objective 2.1)

**Fodder**

Another important product line that is connected to the wider input retail system, but often emerges in parallel is commercial fodder. The scale efficiencies and cost of transport are often drivers of some level of independence around retailing commercial fodder, but some level of integration would be very important for generating demand. Given respondent concerns in accessing pasture and the likelihood that climate change will make the situation more uncertain, commercial production that can achieve some level of scale efficiencies would be critical if smallholders are to be able to access quality assured fodder. Respondents indicated that there are already commercial farmers or could-be-commercial farmers producing fodder in the South that could be scaled. There are also informal arrangements with, primarily
sugar cane farmers, that charge cattle farmers to let them graze on their land after harvesting. Formalizing/improving and scaling such arrangements would also improve access and resilience of fodder production. Retailing fodder, especially to farmers that have typically moved animals around to graze for free, will take some time and require relational-based marketing strategies and tactics. (Objective 2.2)

**Breeding and artificial insemination**

Some respondents indicated that they are already active in breeding and breed research. Artificial insemination was not mentioned as an active service, but it would be expected to emerge at some point, once cattle/dairy production becomes more commercialized. A near to medium term challenge will be that most farmers cannot shift quickly to intensive livestock production, especially for cattle, goats and sheep, which would mean the value of specialized breeds will be spotty. At the same time, there are some organizations, such as Ferme Andre Pierre de Production Agricole de Dumas that are working on breed improvement that could be leveraged to accelerate the change process. Critical to catalyzing a change process that will stick and grow over time will be understanding the trade-offs and focusing on market signals indicating the system sees the value in improved breeds would be important. (Objective 2.1)

**5.2.3 FINANCIAL SERVICES SYSTEM**

Financial service provider respondents indicated an interest in and some efforts to engage livestock market actors. In contrast, livestock market actors did not indicate they rely on financial service providers, and some indicated that they avoid formal loans. Additionally, livestock market actors indicated that they are more likely to obtain a financial service via supply/retail chain connections. A stakeholder process would be useful in pulling out and discussing near term opportunities and challenges that PARE can work on to improve more immediate working capital and bridge capital (i.e., capital that can help firms manage through current transitions), but it certainly seems like the financial services market system is still relatively immature. For example, financial services respondents indicated that they are interested in, but have not developed agricultural specific departments, even though one respondent indicated they have agricultural specialists on staff. It would be important for financial service providers to have a dedicated department for agricultural loans that can be tailored to the specific cash flow, seasonality, and risks profiles of livestock businesses. Additionally, financial service providers indicated they focus on relatively standard SME loans, which suggests that some shift to credit scoring would be important to emerge over the near to medium term. (Objective 2.4)

Additionally, private capital, factoring, leasing, or insurance were not identified by respondents as common or important. While that makes sense in the current contexts, those and other types of financial services are central to improving the livestock market system competitiveness, inclusivity and resilience. Private capital in particular, especially patient, shared-risk capital would be important to emerge as a source of investment. In this context, transactional advisory services might be an initial area to support, if impact investors enter/become more prominent once the livestock market system starts to stabilize. (Objectives 2.4, 3.1)

Insurance is a financial service that might emerge more quickly as a way to mitigate some risks, but respondents did not identify insurance in the current context as central to how they manage risks. Other MSD efforts have found that health and other types of common insurance have been helpful at smoothing out relationships along supply chains and retail distribution networks as they limit down time and disruptions. Over the long term, there are examples of index insurance for livestock, including weather-based insurances that could be adapted, if not already in the works, for Haitian contexts. (Objective 1.2, 2.4, 3.1)

Factoring, or the use of accounts receivable as collateral for a loan, is another potential service that could be helpful, especially since livestock actor respondents indicated that they are providing finance through
transactions. Factoring could allow financial service providers to take on some of the lending risk in this kind of financial service, which could improve and expand financial flows through the livestock market systems. (Objective 1.2, 2.4, 3.1)

5.2.4 ENABLING ENVIRONMENT

As the graphic to the right suggests, it is useful to look at government and government efforts through systems lenses. The use of systems lenses often provides important insights into how the government engages its constituents in ways that allow for ongoing improvements in the enabling environment. In this regard, government respondents did indicate that while they do not focus on engaging constituents, especially livestock market actors, in making policy, they do try to track and respond to the needs of livestock market actors. At the same time, it does seem as though their efforts are fairly narrow with a focus on disease. The Northeast DDA indicated that they have mechanisms via a group called GSB (gwoup sante bet) and a table of agricultural concertation (TCAD), where all actors can share information. The influence or participatory nature (i.e., multiple directional communications) of these mechanisms was unclear, and indications are that the communications are not dynamic or two-way.

Stakeholder processes can be used to focus on each function in the policy cycle independently. For PARE, it would be useful to focus on participatory policy development processes. While policies are critical, it is equally and maybe more important to focus on enforcement and monitoring processes. These functions, while not always identified as participatory, require multiple stakeholders, including market actors, civil society, media, researchers, universities, supporting services, etc. In practice, how policies are enforced determines how the policy actually works on the ground and can often diverge from policy intentions. Monitoring is critical to identify and call out when such a divergence or unintended consequence emerges. Using stakeholder processes to regularly raise, discuss, and develop consensus around these functions would be important. (See Annex 4 for a policy change model.)

Trade

One of the more important systemic changes for Haiti from a resilience perspective is the shift to having multiple interconnections related to retail distribution, supply chains and support services of livestock market systems. The over-reliance on Port-au-Prince created a level of fragility that caused the livestock market system to falter once the chaos in Port-au-Prince took hold. Building connections into the Dominican Republic as an alternative source of inputs, knowledge, end markets, investment, etc. is a critical near-term objective, but also an important element of a longer term competitive, inclusive and resilient livestock market system. It is also important via Cap Haitian and potentially through a port in the South, to develop more and varied international connections in the region.

Dominican Republic

Improving the near-term connections and flows between the Dominican Republic and regional livestock market system actors could substantially stabilize and potentially set the foundations for longer-term growth. If the connections and flows between the North and Dominican Republic stabilize, formalize, and start to grow, more advanced secondary but critical support services could emerge quickly. For example, there are examples of farms and market actors that would like to improve genetics, but the current uncertainty makes the value of breeding, artificial insemination, and genetics/breed research limited as they are longer-term investments that require a level of stability and growth orientation that are currently not possible. With that said, the stability that could come from greater connectivity with the Dominican Republic, could quickly bring about connections with research institutes, firms, and universities across the border that have expertise in these areas. Building on existing connections and expanding to include more sophisticated market system functions would be important.
There would also be a policy component that would start with the stakeholder processes to identify near-term opportunities to improve the flow of trade across the North. As such improvement emerges, there is likely to be political and policy elements to further improve formal trade, including catalyzing direct trade with the South. In the context of the enabling environment recommendations above, it might make sense for PARE to support such efforts, as they would likely be important to making the Southern RFZ livestock market systems more resilient.

International Connections
Respondents indicated that they have had connections in the US and other regional countries, but as the livestock market systems faltered some of these connections have slowed or stopped. Revitalizing these connections may not be an initial priority, but with some stability it will be important to diversify beyond the Dominican Republic, especially given the case that respondents indicated many inputs from the Dominican Republic come from other countries which should have direct connections to Haiti. There are two important opportunities over the medium to longer-term. The first is in access to veterinary and inputs that can flow more directly to the North and South to diversify away from Port-au-Prince and the Dominican Republic. The second is to export goats. Haiti is known for its larger goat population in the region and could with improvement in basic animal husbandry and disease management gain a foothold in the regional goat trade.

5.3 FACILITATION GUIDANCE: SELF SELECTION, RELATIONSHIP, OWNERSHIP AND INTENSITY (ROI) AND THE MESSINESS OF CHANGE

In addition to the specific recommendations above for stakeholder engagement and points of entry for increasing resilience, competitiveness, and inclusiveness in the various livestock market systems, there are some general guiding principles that should guide PARE’s interventions and facilitation of livestock market systems’ growth. Most importantly, market actors are components of a market system. The aim of a market systems development project is to strengthen the capabilities and resilience of a market actor as a means to achieving system change, and not just as an end in itself. Project activities need to be viewed from the perspective of the system and how the actors behave in that system, and whether they can bring about change in the system because it is in their interests. With this framing, the PARE Activity should engage with and monitor changes in the market system in an on-going manner that can inform its adaptive management.

- **Always assess and adjust from the systems’ perspective:** For change to be durable, internal system mechanisms including formal and informal rules and norms have to change in favor of the PARE’s behavior change objective.

- **Frame offers in ways that test commitment/ability to influence the system:** Individual firms are only valuable to the extent they can influence or create leverage for change. Individual actors or firms should show commitment through “self-selection” – demonstrating behavior changes that are in line with PARE’s objectives, and commitment in the form of time, money and energy to changing these behaviors. Ongoing Activity engagement/resource allocation has to be based on potential for wider system change.

- **The Relationship Ownership and Intensity of facilitation:** Three basic points should guide market system facilitation:
  - **Relationships:** Facilitation should increase the connectivity within a system. Facilitators should ask the question, “Does this intervention improve the connectivity in the system, or
does it redirect actors toward the project?"

- **Ownership:** Facilitation should catalyze an internal change process that is durable. Facilitators should ask the question, “Is this intervention catalyzing an actor or actors to want to change for their own interests, or is it creating a temporary effect driven by the project?”

- **Intensity:** Facilitation is more difficult if substantial resources are used to drive internal system change. Facilitators should ask the question, “Are the resources offered or the role of the facilitator appropriate to achieve increased connectivity and internally driven change, or are the resources redirecting actors toward the project or creating a false incentive that will fade with the project’s end?”

**Change is Messy:** Systems change is dynamic and unpredictable, which means a change strategy needs to adapt. Monitoring how market systems are changing in Haiti will be useful for iterative adaptation of the PARE Activity intervention strategy. The following lenses can be useful in monitoring and making sense of changes in livestock market systems in Haiti.

- **Attractors:** Attractors are new behaviors, mental models, technologies, social norms, products, business models, etc. that emerge in a market system and begin to be perceived as more attractive than the existing behaviors, mental models, etc.. Over time, if the attractor remains beneficial, then it may be normalized within the system. Implicit in this framing of attractors is that the way a market system works makes sense in that context, even if some of the outcomes may seem undesirable. When applying the idea of attractors, consider the following:
  - Focus on behaviors, as opposed to specific partners, so the project can adapt to signals from the systems that a behavior is perceived as attractive or not, which is predictive of how change will manifest.
  - Use specific behaviors as indicators of change and as criteria for programmatic support. For example, butcheries should improve sourcing of quality livestock, so focus on specific behaviors related to sourcing relationships that are likely to improve supply chains quickly.
  - Focus on behavior changes that align with systemic change goals and provide clear benefits from the perspective of the market actor. Start with the easiest behaviors that are most attractive and then move to more complicated behaviors. For example, working with vets and agrodealers that have already shown interest in providing advice to its customers and help them test vet agent distribution models.
  - Amplify the benefits from the new behavior as perceived by the actor, by messaging and engagement with the market actors about the benefits of the behavior change. For example, using local media to cover the vet and agrodealers that are delivering value to smallholders.
  - As initial actors take on the new behaviors, amplify to other market actors. For example, amplify benefits by raising the profile of the market actor doing the behavior via media, social media, civil society, etc.

- **Fast- and slow-moving variables:** Some forces and factors in a system are more influential than others. Generally slow-moving variables are forces and factors that are very influential on the system. Mental models, cultural/cognitive institutions, and deep-seated social norms are slower moving variables. Fast moving variables are more transactional, and less indicative of lasting change. The fast and slow terminology comes from the idea that the feedback loop is slower for forces and factors that are more deep-seated and controlling of a system. For example, the “no risk/no investment” coping mechanism feedback loop is likely to be slower than feedback loops related to commercial transactions around inputs.
It is important to note that fast moving variables are often harbingers of deeper-seated, systemic change. So, how fast- and slow-moving variables interact and respond to each other in Haiti will provide insights on how and when systemic change is taking hold. Some practical guidance for applying the concepts of slow- and fast-moving variables includes:

- Recognize that typical results framework monitoring indicators are often fast-moving variables, so they are not appropriate indicators of systemic change (i.e., change in slower moving variables) by themselves.
- Changes in faster moving variables should trigger project response to learn if the change is catalyzing any knock-on changes within the system that could be signaling potential change in slower moving variables (i.e., an increase in sales of feed triggering a change in intensification of poultry production).
- When identifying signals from the system, adapt to amplify those signals. If producers are buying more feed, adapt interventions to help input providers to provide more feed and other services like day-old-chicks or vaccinations.
- Look for how other firms are picking up on signals from early adopters to assess if changes in faster moving variables are having any effect at a landscape level.
- When PARE is seeing an effect on slower moving variables, it is important to encourage continued change of slower moving variables. So, if input providers are expanding their offering of products, are there signals that other support services (finance, processing, etc.) improving?

**Fit landscapes:** System change is by its very nature dynamic. The landscape of that system is different at any point in time, as behaviors, enabling environments, mental models, etc. change over time. For meaningful, durable change to occur, an initial or catalytic change has to fit the landscape at that particular point in time, in ways that push on or disrupt the underlying assumptions or established institutions. Over time systemic change happens as the result of a series of fit landscape changes. The challenge is that where the next ‘attractor’ emerges may not be closely associated to where the first catalytic attractor emerged. For example, a feed supplier in the South of Haiti may take on new marketing and distribution tactics to out-compete other feed firms based on value delivered. This may not have much influence on other high quality feed firms or even the overall feed market system at first, but it may open the landscape up to an agrodealer or distributor that shifts to a more customer and growth orientation that in turn, kicks off a franchise growth strategy based on a quickly growing loyal customer base.

- Analysis should explore why behaviors that may have been problematic in one landscape could be attractive in a different context – which actors benefit, how do those benefits align with power dynamics/small-large group dynamics, etc.
- Use the concepts of fast- and slow-moving variables to help identify potential starting points and consider how a change in faster moving variable might disrupt or catalyze an attractor to emerge that is a slower moving variable (this is an indication that the fit landscape is or has changed).
- Interventions should focus on an initial change that seems doable and clearly beneficial/attractive but would be catalytic for wider change. For example, a promotional event that leads to sales can open opportunities to engage market actors around more strategic/business model ideas. Over time, the objective is to catalyze change in slower moving variables that affect the competitive landscape and overall market system.
- Invest in MEL/CLA capacities to constantly scan for and identify indications that the landscape could be changing.
By applying these guiding principles, the PARE Activity will be able to identify changes and opportunities in the livestock market system in Haiti that could promote and amplify behaviors that will bring about improved resilient, competitive, inclusive market systems in Haiti, thereby improving the well-being and resilience of its people.
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## ANNEX 1: INTERVIEW LISTS

### Preliminary Interviews

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<tr>
<td>Removed for publishing</td>
<td>CRDD-Terrier Rouge, Fort Liberte/Ouanaminthe</td>
<td>USAID funded ag-forestry center managed by govt now</td>
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<td>Removed for publishing</td>
<td>Probo-K, Fort Liberte/Ouanaminthe</td>
<td>Commercial broilers and pullets</td>
</tr>
<tr>
<td>Removed for publishing</td>
<td>Caisse Populaire le Dauphin, Fort Liberte/Ouanaminthe</td>
<td>MFI</td>
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<td>Removed for publishing</td>
<td>AVIMAX, Limonade</td>
<td>Chick hatchery</td>
</tr>
<tr>
<td>Removed for publishing</td>
<td>Collectif du Lutte Contre l’Exclusion Sociales (CLES), Fort Liberte/Ouanaminthe</td>
<td>Animal feed</td>
</tr>
<tr>
<td>Removed for publishing</td>
<td>Fort Liberte/Ouanaminthe</td>
<td>Butcher</td>
</tr>
<tr>
<td>Removed for publishing</td>
<td>Ferme Kay Thomas à Trou du Nord</td>
<td>Poultry breeder</td>
</tr>
<tr>
<td>Removed for publishing</td>
<td>Fort-Liberté</td>
<td>Butcher and Deli</td>
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**Focus Groups**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Location</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viaud Fafane Fourrage</td>
<td>Port Salut</td>
<td>Breeder and feed/fodder</td>
</tr>
<tr>
<td>Groupe d’éleveurs Scipion</td>
<td>Port Salut</td>
<td></td>
</tr>
<tr>
<td>Federation des Grands Éleveurs du Sud (Ferme Leblanc)</td>
<td>Les Cayes</td>
<td>Farmer group/coop</td>
</tr>
<tr>
<td>APWOLIM</td>
<td>Cap Haitien</td>
<td>Dairy Coop</td>
</tr>
<tr>
<td>Assoc des Jeunes Reunis pour le Developpement de Plateau</td>
<td>Hinche</td>
<td>Youth/women coop, goats &amp; chickens</td>
</tr>
<tr>
<td>Jean Joseph André</td>
<td>Ferme André Pierre Agricole Dumas FAPAD, Fort-Liberté</td>
<td>Association supported by Heifer</td>
</tr>
<tr>
<td>AFLIDEPA</td>
<td>Limonade</td>
<td>Women’s livestock coop</td>
</tr>
<tr>
<td>GEDWA (Let Agogo)</td>
<td>Fort Liberte/Ouanaminthe</td>
<td>Dairy coop</td>
</tr>
<tr>
<td>APWOLEP</td>
<td>Pignon</td>
<td>Dairy Coop</td>
</tr>
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ANNEX 2: DATA COLLECTION TOOLS

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ANNEX 3: LIVESTOCK MSR INDEX SCORE BY REGION

Livestock - North

- Structural Domains
- Behavioral Domains

Cooperation (1.73)
Rule of Law (1.83)
Power (1.90)
Diversity (1.69)
Connectivity (1.84)
Competition (0.99)
Decision-making (1.63)
Business Strategy (1.38)

Livestock - South

- Structural Domains
- Behavioral Domains

Cooperation (1.71)
Rule of Law (1.83)
Power (1.88)
Diversity (1.68)
Connectivity (1.77)
Competition (0.99)
Decision-making (1.63)
Business Strategy (1.38)
Dairy - North

Structural Domains
Behavioral Domains

Cooperation (1.90)

Rule of Law (2.17)
Competition (1.03)

Power (2.03)
Decision-making (1.63)

Diversity (1.93)
Business Strategy (1.60)

Connectivity (2.10)

Dairy - South

Structural Domains
Behavioral Domains

Cooperation (1.83)

Rule of Law (2.17)
Competition (1.03)

Power (2.03)
Decision-making (1.63)

Diversity (1.90)
Business Strategy (1.63)

Connectivity (2.10)
### Cattle - North

- **Rule of Law (2.17)**
- **Competition (1.00)**
- **Decision-making (1.63)**
- **Business Strategy (1.23)**
- **Connectivity (1.80)**

### Cattle - South

- **Rule of Law (2.17)**
- **Competition (1.00)**
- **Decision-making (1.63)**
- **Business Strategy (1.27)**
- **Connectivity (1.77)**
Poultry - North

- Structural Domains
- Behavioral Domains

Cooperation (1.67)

Rule of Law (1.00)

Competition (0.93)

Power (2.17)

Decision-making (1.63)

Diversity (1.83)

Business Strategy (1.50)

Connectivity (1.70)

Poultry - South

- Structural Domains
- Behavioral Domains

Cooperation (1.67)

Rule of Law (1.00)

Competition (0.93)

Power (2.17)

Decision-making (1.63)

Diversity (1.83)

Business Strategy (1.43)

Connectivity (1.47)
Goats/Sheep - North

- Structural Domains
- Behavioral Domains

Cooperation (1.67)

Rule of Law (2.00)  Competition (1.00)
Power (1.97)  Decision-making (1.63)
Diversity (1.60)  Business Strategy (1.20)
Connectivity (1.77)

Goats/Sheep - South

- Structural Domains
- Behavioral Domains

Cooperation (1.67)

Rule of Law (2.00)  Competition (1.00)
Power (1.90)  Decision-making (1.63)
Diversity (1.60)  Business Strategy (1.17)
Connectivity (1.73)

ANNEX 4: POLICY CHANGE MODEL
The table below provides a benchmark of change model, including an assessment of the current benchmark for Haiti. The table also provides potential intervention ideas to catalyze a more inclusive and resilient market system governance landscape.

<table>
<thead>
<tr>
<th>Political Systems Function</th>
<th>Current Stage of Haiti</th>
<th>Recommended Interventions</th>
</tr>
</thead>
</table>
| Policy Development Process | ● **Early stage**: Policy development is expert driven with little input from various constituents  
● **Mid stage**: Expert policies are vetted by a narrow set of connected stakeholders  
● **Tipping point**: Policy development/adaptation process is objective, evidence driven and widely participatory leading to consensus on final policy | ● Catalyze effective capacity in coalition building including stakeholder methodologies, including the range of pain points listed above.  
● Catalyze effective analytical capacity inside and outside government to assess policy options that could include connecting UEP and universities.  
● Catalyze local, effective and diversified market, civil society, media, research, and political systems to effectively advocate for and participate in policy development processes  
● Catalyze the capacity of market, civil society, media, research, and the wider political systems to develop, analyze and communicate evidence related to policy options |

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<tr>
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<th>Recommended Interventions</th>
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</table>
| ● **Early stage**: Policy development is expert driven with little input from various constituents  
● **Mid stage**: Expert policies are vetted by a narrow set of connected stakeholders | ● Catalyze effective capacity in coalition building including stakeholder methodologies, including the range of pain points listed above.  
● Catalyze effective analytical capacity inside and outside government to assess policy options that could include connecting UEP and universities.  
● Catalyze local, effective and diversified market, civil society, media, research, and political systems to effectively advocate for and participate in policy development processes  
● Catalyze the capacity of market, civil society, media, research, and the wider political systems to develop, analyze and communicate evidence related to policy options |
<table>
<thead>
<tr>
<th>Political Systems Function</th>
<th>Current Stage of Haiti</th>
<th>Recommended Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy Translation into Laws, Regulations, and Enforcement Protocols</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● <strong>Early stage:</strong> Laws and regulations are developed by experts with limited transparency in the process of formalization</td>
<td></td>
<td>● Catalyze effective capacity/expertise to interpret policy into viable laws and regulations</td>
</tr>
<tr>
<td>● <strong>Mid stage:</strong> Some level of transparency with connected stakeholders</td>
<td></td>
<td>● Catalyze rules and procedures within process to ensure transparency, accountability mechanisms, and consistency with policy objectives</td>
</tr>
<tr>
<td>● <strong>Tipping point:</strong> The translation process is transparent, professional, consensus driven, fair and evidence based with clear and defined rules and/or guidelines for implementation and enforcement</td>
<td></td>
<td>● Catalyze capacity of market, civil society, media, research, and political systems to engage and influence process that could include regular updates or meetings provided by a local association or chamber with support from PARE.</td>
</tr>
</tbody>
</table>

<p>| Public Education on Laws and Regulations | | |
| ● <strong>Early stage:</strong> A formal announcement of laws and regulations that is available to the general population | | ● Catalyze standard rules for communicating laws, regulations and enforcement protocols |
| ● <strong>Mid stage:</strong> Laws, regulations, and enforcement protocols are publicized through stakeholder events and formal announcements | | ● Improve capacity of government and civil society to communicate via many communication platforms that could include support in developing communications tools. |
| ● <strong>Tipping point:</strong> Laws, regulations, and enforcement protocols are publicized through stakeholder events and communicated widely through various platforms that includes resources for citizens to learn their rights, responsibilities, and processes for disputes/complaints | | ● Catalyze capacity of government and civil society to manage complaints and disputes in fair, transparent and merit-based ways that could include support to local convening organizations to raise emergent issues. |
| | | ● Catalyze capacity of market, civil society, media, research, and political systems to interpret and amplify communications of laws, regulations, and enforcement protocols, especially rights of citizens. |</p>
<table>
<thead>
<tr>
<th>Political Systems Function</th>
<th>Current Stage of Haiti</th>
<th>Recommended Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy Implementation of Law, Regulations and Enforcement</td>
<td>• <strong>Early stage:</strong> Specific plans on how to implement the policy through the formalized laws and regulations, as well as the instruments of government (agencies, departments, etc.)</td>
<td>• Catalyze effective capacity and incentives within enforcement agencies to apply laws, regulations, etc. in ways that align with intent/objective of the policy</td>
</tr>
<tr>
<td></td>
<td>• <strong>Mid stage:</strong> Some assessment of incentives and capabilities of enforcement agencies that informs and aligns the planning process for rolling out the laws and regulations, so they align with policy objectives, as well as investment in independent mechanisms for handling complaints and disputes</td>
<td>• Catalyze effective internal feedback mechanisms especially for constituents to ensure challenges, misalignments, etc. emerge/are brought to light.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Tipping point:</strong> Implementation and enforcement practices are conducted in fair and consistent manner that aligns with policy goals/objectives, and there are clear processes for raising complaints/disputes</td>
<td>• Catalyze capacity of market, civil society, media, research, and political systems to reinforce and support effective implementation of policy via the enforcement of laws and regulations that could include support to local organization to track and publish market actor perspectives around quality of enforcement</td>
</tr>
<tr>
<td>Political Systems Function</td>
<td>Current Stage of Haiti</td>
<td>Recommended Interventions</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-----------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Policy Monitoring and Assessment by Stakeholders</td>
<td><strong>Early stage:</strong> Some post implementation analysis by experts</td>
<td><strong>Early stage:</strong> Catalyze effective internal capacity of formal government to monitor, evaluate and learn if policy objectives and enforcement practices/outcomes are aligned <strong>Mid stage:</strong> Experts analysis is complemented with some emerging monitoring by stakeholders, media, researchers, academia, etc. <strong>Tipping point:</strong> Monitoring and evaluation process that is ongoing from the policy development function, is highly diverse and participatory (e.g., stakeholders, researchers, academia, media, civil society, etc.) with effective analytical capacity and feedback/communication mechanisms that lead to effective adaption and ongoing improvements in the enabling environment</td>
</tr>
</tbody>
</table>