



Development and analysis of service delivery models

Guidance note on application of SDM analytical framework

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1.0 Purpose and application of framework and guidelines

1.1 SDM Resilience analytical framework

The purpose of the Framework is to aid the assessment of the resilience of a business champion's (BCs)¹ Service Delivery Model (SDM) by examining its ability to absorb, adapt and respond to shocks and stresses in its environment as well as identify critical risks to SDM resilience and how these can be mitigated.

SDM resilience is assessed at three levels (lenses):

1. **Service business model level** – does a SDM have the capability to absorb shocks and stresses?
2. **Market system level** – does a SDM respond to the wider system and service landscape?
3. **CSA / GAP outcome level** – How effectively does a SDM address inclusive climate smart / agricultural good practice goals?

1.2 Application of the framework

The Framework was designed with flexibility in mind – it is not a rigid tool, but rather a guiding framework that can be applied at different points in the programme cycle and with different levels of effort subject to the needs of the user:

- a) **Pre-intervention planning.** The Framework can be used to support system and partner diagnostics in order to help identify relevant SDMs (in terms of the smallholder and CSA/GAP priorities they address) and partnerships with innovative business champions. Considerations for application at this stage of the project cycle:
 - i) *Service business model analyses* would be expected to be based on a combination of both actual and projected business data and should identify which parameters require validation during the pilot phase.
 - ii) *Market systems analyses* should inform the identification and prioritisation the sectors, systems and system constraints important to project beneficiaries, and taking into consideration CSA and/or GAP opportunities. Analyses should encompass the assessment of the incentives and capacities of key market actors and potential partners to both innovate with SDMs and sustain those innovations.
 - iii) *CSA / GAP outcome analyses* would be expected to be based on (realistic) outreach and household-level impact projections – supported where possible with research and/or on-farm data – to be validated during pilot phase.

Level of Effort: The breadth and depth of market analyses will depend on the scope and complexity of the specific value chain in question as well as the resource envelope, and thus ambition, of the initiative as a whole. A minimum of 25 person days (inclusive of a minimum 5-day rapid market assessment) is recommended.

- b) **Ongoing intervention review.** The Framework can be used to support ongoing performance monitoring and to inform intervention and partnership appraisal and adaptation. Considerations for application at this stage of the project cycle:
 - i) *Service business model analyses* will be based on actual business model data enabling verification and/or refinement of the underlying business case and viability of the SDM or inform remedial action / intervention cessation if proven non-viable.
 - ii) *Rapid market systems analyses* should seek to confirm and/or update existing understanding of system challenges and priorities in order to affirm the ongoing relevance of the SDM and/or emerging issues for which SDM adaptation may be warranted.
 - iii) *CSA / GAP outcome analyses* would be expected to be based on actual outreach and household-level impact data and provide the basis for quantitative and qualitative SDM performance assessment, refinement and decision making as appropriate.

¹ BCs are lead value chain actors in the organisation and operation of a SDM including off-takers, cooperatives and service providers

Level of Effort: Subject to the quality and availability of data, 5- 10 person days is recommended.

- c) **Post-intervention evaluation.** The Framework can also be used to support end-term evaluation in term of the performance, efficacy and results of a SDM support intervention. Considerations for application at this stage of the project cycle:
- i) *Service business model analyses* will be based on actual, multi-year business model data able that will also support sensitivity analysis and inform scale-up plans, information and communication needs.
 - ii) *Rapid market systems analyses* should seek to capture any systemic changes (or signs of) resulting from the SDM innovation(s) being supported, using pre-intervention information and analysis as the baseline.
 - iii) *CSA / GAP outcome analyses* would be based on actual (and attributable) outreach and household-level impact results compared to pre-intervention baseline data.

Level of Effort: Subject to the quality and availability of data, a minimum of 15 person days is recommended.

1.3 Aim of the guidelines

These guidelines provide users with basic instructions on how to use the framework. Specifically, they cover:

- a brief overview of the aims and focus of each of the three respective analytical lenses
- a presentation of the analytical tool(s) applied in terms of the key steps in analysis and the key questions which each tool seeks to answer
- guidance for interpreting and reporting findings

2.0 Service Business Model Level Assessment

- This lens seeks to understand whether the SDM and the wider business within which it sits have the capability to absorb shocks and stresses.
- Involves the assessment of two key aspects: (1) the viability of the identified innovation and (2) the will (incentives) and skill (capacity) of the business champion to implement and sustain the innovation over time.
- The lens aims to help business champions better understand, prioritise and address the internal challenges and risks facing their SDM, and help {SNV and its} partners to identify gaps and opportunities to strengthen SDM resilience and thereby develop more targeted and relevant support plans.

2.1 Framework for analysis of model-level resilience (Analytical Tool)

The framework below breaks down the proposed two elements of analysis (the innovation and the business champion as the innovator) into the criteria that will be evaluated, and the subsequent questions designed to capture and define the essential elements of model resilience on the ground. This framework of analysis builds on CRAFT's business case assessment process, standard due diligence metrics and incorporates lessons/ good practices from other programmes.

Element	Criteria	Key questions	Parameters to be Assessed
The innovation <i>Characteristics and viability</i>	Complexity of, and inputs that are required, to effectively implement the innovation and adapt it over time	<ul style="list-style-type: none"> • Degree of investment (financial and other key resources, and time) required to pilot and scale up the innovation • Degree of technical and/or local knowhow and information required and accessible • Degree and nature of risk involved in piloting this innovation and how the risks will be mitigated? Is there a risk of doing harm? 	Assessment of the basic commercials of the SDM, including Inputs - essential requirements for SDM implementation including the financial, human and technical resources.
	Viability of the innovation	<ul style="list-style-type: none"> • Is there a credible, evidence based, business case for the innovation? If yes, what is it and what factors is it reliant on? 	<ul style="list-style-type: none"> • Quantifiable/ quantitative cost-benefit and risk analysis. • Does the innovation have the reserves needed to absorb, adapt and recover from shocks and stress?

Element	Criteria	Key questions	Parameters to be Assessed
<p>The business champion: Capacity and incentives (in the context of the proposed innovation)</p> <p>Capacity: to successfully undertake the innovation and assessment of gaps that provide a basis for intervention support.</p> <p>Incentives: ownership of, and commitment to, the innovation</p>	<p><u>Capacity:</u> the essentials to manage the innovation now and in the long term – and where, if any, there are capacity gaps, including standard due diligence metrics and other business measures to assess viability of the business as a potential partner</p> <p><u>Incentives:</u> the real and perceived benefits to making the innovation work</p>	<ul style="list-style-type: none"> • How robust is the partner’s business SDM strategy taking into account: <ul style="list-style-type: none"> a. <i>It’s SDM leadership and management processes and practices,</i> b. <i>The SDM-specific management and technical skills and experience of its management and staff</i> c. <i>Its financial allocations for the SDM (including historical performance of revenues, costs, cashflow, assets, liabilities, and key financial ratios (profitability, leverage, efficiency)).</i> d. <i>Business champion experience in this and/or related value chains. How effectively has it managed challenges in the past?</i> e. <i>Its competitive position and history including number and relative strengths and weaknesses of competitors</i> f. <i>The key risks faced by the partner – and how effectively it mitigates these \</i> • Technical capacity: <ul style="list-style-type: none"> a. <i>What evidence is there that the partner has the required technical knowledge and experience, and local knowhow to implement the innovation – both for and beyond the pilot? Any specific gaps that need addressing for this innovation specifically?</i> b. <i>Does the partner have a track record of innovating? Does it have a track record of collaborating with others?</i> c. <i>If the innovation fails, what are the risks for the partner (and other players)?</i> <ul style="list-style-type: none"> • What are the motivations for the partner to invest in this innovation – as a pilot and ultimately to scale up? Take account of short and medium-term benefits. • Are there potential benefits for the partner that it is not aware of? • Are there non-financial incentives – if yes, what are they and how important are they? Do they relate to the individual decision makers rather than the business? • Does the innovation, and the potential benefits it brings, fit with and compliment the partner’s current business strategy? How? 	<p>Application of standard due diligence metrics and other business measures to assess viability of the business as a potential partner:</p> <ul style="list-style-type: none"> • Review of a business champion’s track record and history to validate (or not) its stated ambitions. • Evaluation of the BC’s revenue model and assessment of its ability to earn revenues from the innovation, additional capital/ resources required, quantification of key innovation {and SDM} expenses. <ul style="list-style-type: none"> • Evaluate the strength/ commitment of the owners to support the success of the innovation. • Review the real and perceived benefits to making the innovation work (financial and other) by the BC and other service providers.

	<ul style="list-style-type: none"> • Does the partner have a clear ambition to expand/grow in the way the innovation allows? • Does the partner have a track record of innovation and/or investment in the specific area of the innovation? • Does the partner have a track record of working with aid or government funded programmes? If yes, is the pursuit of grants part of the partner’s business strategy?
Reasons that the partner has not initiated the innovation before now	<ul style="list-style-type: none"> • Why hasn’t the partner initiated this or a similar innovation in the past? Is it an internal capacity constraint, or an external issue in the system (e.g. information or a government policy)? • What is different now? Will the above constraints remain after CRAFT funding for the pilot ends?

2.2 SDM Analysis and modelling – reporting guideline

Following the gathering of information via the analysis tool, this section provides a guide as to how the content will be organised into a report that captures the relevant and essential elements regarding the assessment of model resilience.

2.2.1 Sub-section One: Business viability of the business champion

This is an important reference point that represents the BC’s actual status and parameters currently in use as well as the basis of assumptions to be used for projections and sensitivity analyses.

Section	Purpose	Parameters included
Historical analysis	<ul style="list-style-type: none"> • An assessment of the BC’s overall capacity to manage the additional requirements of the proposed innovation and related service delivery components. • The analysis also provides a background for assessing the reasonableness of assumptions underlying previous business plan projections and to inform key assumptions or changes to be considered in view of the proposed SDM. 	Financial indicators – revenues, expenses/ costs – key costs and drivers, profitability, cash flows, assets and liabilities: Ratios – profitability ratios, asset/ debt; efficiency ratios Assessment of the impact of the grant component in the business where applicable. Variance analysis Growth indicators Trend analysis – revenue, costs Farmer income analysis – revenues, costs, prices Profitability by value chain if applicable
Projections	Assessment of projected performance and considerations for revision of assumptions	Variance analysis (performance of actual vs forecast) Revision of assumptions Additional assumptions to be considered

Assumptions about core service viability	This section looks at key business model variables to be considered with regard to service delivery. Viability of the SDM will be dependent on realisation of the anticipated growth and subsequent revenue generated as a result of the underlying services, ability to meet the related costs and earn profits.	<ul style="list-style-type: none"> • Revenue – confirm basis for calculation (volume sold, selling prices, number of farmers, yield, no of acres) • Costs – ensure all service delivery costs are included: <ul style="list-style-type: none"> ○ Direct costs – e.g. product purchases, transportation costs, packaging (if applicable, local agents, product losses, ○ Operational and admin costs – e.g. training costs, aggregation/ warehousing, farmer mobilization, ICT expenses, staff, marketing • Capital expenditure – e.g. plant setup/ expansion costs, machinery/ equipment, vehicles, land acquisition • Working capital considerations
Sensitivity analysis	To assess commercial robustness of the BC by adjusting key parameters. Also important to reveal what the key risks areas for the business are.	<ul style="list-style-type: none"> • Parameters/ variables to be adjusted include: <ul style="list-style-type: none"> ○ Volumes sold and subsequent growth estimates ○ Selling prices ○ Yield ○ No of smallholders under contract/ supplying to the BC ○ Costs • Advisable to conduct a scenario analysis based on a worst case (depicts least favourable or severe outcome), base case (most likely, typical) and best case (most favourable outcome) scenarios by adjusting the parameters accordingly.

2.2.2 Sub-section Two: The business case for small holder farmers

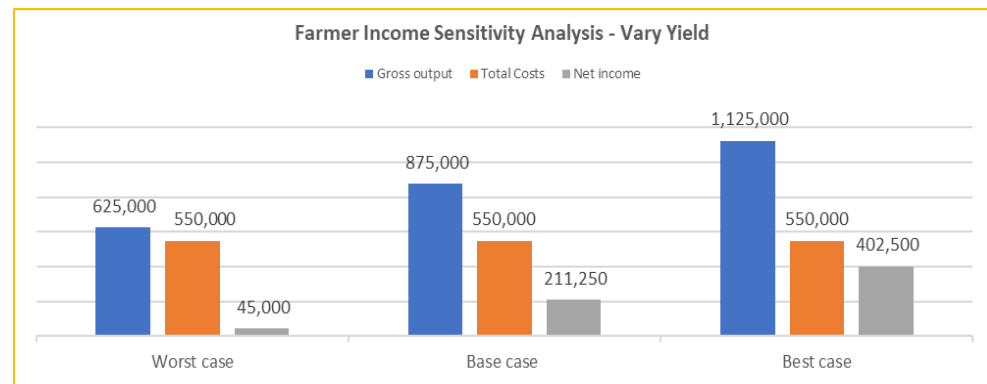
Ideally, the business case for smallholder farmers revolves primarily around growth in revenues as a result of increased productivity from the application of CSA practices to increase farm production, quality and reduced costs of production that together ensure stable margins. Other considerations for the farmer include access to quality inputs, e.g. improved/ certified seeds, access to affordable finance to acquire the inputs, and support services like soil testing, post harvest handling technologies, aggregation and transportation.

Section	Purpose	Parameters assessed
Projections	To ensure reasonableness of assumptions used when calculating farmer income	<ul style="list-style-type: none"> • Yields – for realistic figures, adjust yields where necessary to match on ground performance based on levels of service adoption/ CSA application – possibly consider first period assumptions to be close to the baseline and adjust periodically as yields actually increase • Production costs – while it is important to ensure that all costs are included, check that costs that are expected to increase significantly because of CSA/ GAP application match the requisite practice changes to avoid underestimating farmer income • Farmer selling prices – as above, using average prices based on market • Adjust for <100% purchase of produce from the farmer

Sensitivity analysis

To assess the vulnerability of farmer returns by adjusting key variables.

- Check that number of seasons considered per year are as per the situation on the ground to avoid over-estimating production – e.g. applying two seasons yet farmers may only be active for one season when the weather is favourable
- Check that all costs are considered – e.g. financing, insurance, aggregation
- Parameters/ variables to be adjusted include:
 - Volumes sold and subsequent growth estimates
 - Selling prices
 - Yield
 - Acreage under production
 - Production costs
- Similar to sensitivity analysis of the business champion, consider worst, base and best case scenarios.



Sample diagram – varying yield while keeping other variables constant

2.2.3 Sub-section Three: The business case for service providers

This covers analysis of the commercial case for different groups of service providers including local agents, input providers, financial service providers, ICT providers, extension services, transport and logistics, mechanization/ equipment providers etc. Most of the service providers would expect to grow their customer base and increase revenues through the SDM, thus number of small holders are critical to increase revenue and defray anticipated costs of delivering the various services. The analysis also checks how resilient the service providers' business models are in view of providing the proposed services.

Service providers	Parameters assessed
Extension services	<ul style="list-style-type: none"> • Expect compensation/ remuneration for the work done which should cover their time and incidental expenses
Input providers	<ul style="list-style-type: none"> • Expect to grow their customer base and increase revenues through the SDM. • They would expect that the expected revenues would cover costs including: <ul style="list-style-type: none"> ○ Dedicated staff costs and related expenses ○ Discounted prices/ preferential rates for farmers ○ Farmer training costs on use of products as well as servicing of demo farms where applicable ○ Value added services - logistics and distribution ○ Product development costs to improve products/services offered via the SDM, e.g. seed improvement ○ Risks associated with any credit sales provided
Local agents	<ul style="list-style-type: none"> • Can expect to grow their market share through enhanced networks, relationships and reputation amongst participating farmers • The agents also expect to earn sufficient income to offset costs of mobilizing farmers and other costs including aggregation and related, where applicable.
Transport/logistics providers	<ul style="list-style-type: none"> • Expect to grow their customer base and increase revenues through the SDM.
Financial service providers	<ul style="list-style-type: none"> • Expect to grow their customer base and increase revenues through the SDM, • Interest income • Anticipate reduced portfolio risk through contracts and with BC, off-takers and group lending through cooperatives • The income earned should be able to cover costs including admin costs, staff costs, costs of default, farmer training costs, e.g. on book keeping and financial management.
Insurance service providers	<ul style="list-style-type: none"> • Expect to grow their customer base and increase revenues through the SDM. • Interest from insurance premiums • expected growth in revenues would off-set projected increased costs of service delivery, including: <ul style="list-style-type: none"> ○ Increased administrative costs as a result of increased business and customer growth/ dedicated staff to manage the portfolio ○ Sensitization of farmer groups ○ Ability of farmers to raise the premiums required ○ Payment of claims in the event of losses being incurred.
Mechanization services	<ul style="list-style-type: none"> • Expect to grow their customer base and increase revenues through the SDM.
Public services – e.g. extension, weather services	Value comes through assurance that a wide cross section of farmers and other partners in the ecosystem are benefitting from their services

2.2.4 Risk Analysis

This section includes an assessment of the strengths and weaknesses apparent in the core service model as well as the priorities for key stakeholder groups covered in the SDM. The section also looks at the impact of shocks seen for each of the groups shown below and their subsequent responses.

i. SDM business model risk analysis

	Strengths	Weaknesses	Impact of shocks/ response
Business champion	<i>Benefits offered by the SDM to the BC and its business</i>	<i>Apparent limitations of the SDM within the context of the BC's business model – with particular focus on sustainability and scale</i>	<i>Evidence of how SDM has responded to any shocks to-date (e.g., COVID-19)</i>
Smallholder farmers	<i>Benefits for smallholders in committing to the SDM and any conditionalities required</i>	<i>Risks for smallholders associated with the SDM and/or exclusive commitment to it</i>	<i>Evidence of whether the SDM has improved or reduced smallholder capacity to respond to shocks</i>
Service providers	<i>Benefits offered by the SDM to service providers and their business</i>	<i>Risks associated with the SDM with regards ongoing service provision and market</i>	<i>Evidence of how SDM has enabled service providers to respond to shocks (e.g., COVID-19)</i>

ii. Business model sensitivity analysis

The aim of the sensitivity analysis for the BC and smallholders is to highlight key risk areas by adjusting different variables or parameters. The analysis considers 3 scenarios:

- Worst case scenario – depicts the least favourable outcome such as the lowest expected yields, slower growth rates, low selling prices, low numbers of farmers under contract and lower acreage under production. For more realistic projections in the first year for instance, projections may be considered closer to or at baseline level.
- Business (average) scenario - this is anticipated to be the most likely or typical outcome of the parameters highlighted in the worst case outcomes above.
- Best case scenario – this is the most favorable outcome, where everything goes according to plan and represents high yields and growth estimates, prices, number of farmers under contract, lower levels of costs achieved through efficiency and economies of scale and high acreage under production.

It is prudent to apply conservative estimates of parameters across the 3 scenarios for the first year until actuals can inform more realistic estimates for subsequent periods. For instance, yield levels are dependent on uptake of GAPs and numbers of farmers supplying to a BC may be related to the perceived benefits of an underlying contract.

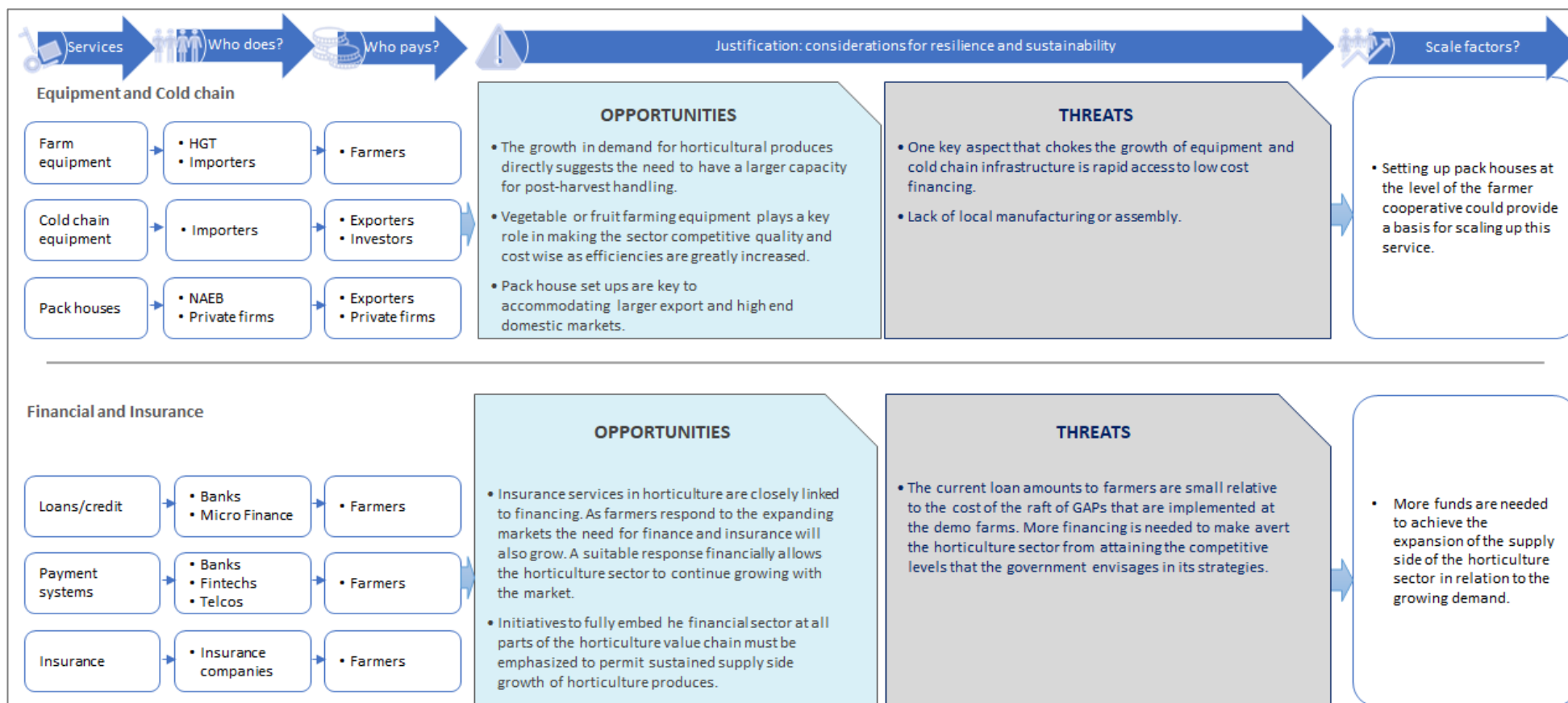
See below illustration of sensitivity analyses for a BC and smallholder.

SDM Sensitivity Analysis – Business Champion					SDM Sensitivity Analysis – Farm Level (one acre)				
Variables	Current case	Worst case scenario	Base case scenario	Best case scenario	Variables	Current case	Worst case scenario	Base case scenario	Best case scenario
Acreage	0.75	0.75	1	1.5	Yield/ acre (Kg)	265	300	450	700
No. farmers supplying BC	1,500	2,000	2,500	3,000	Farm-gate price	900	800	1,000	1,100
Yield per acre (kg)	265	300	450	700	Production costs A	228,750	228,750	228,750	228,750
BC Selling price	1,300	1,300	1,400	1,500	Production costs B	223,000	223,000	223,000	223,000
Cost of sales	85%	87%	85%	80%	% of produce procured	70%	70%	75%	80%

iii. Service system resilience risk analysis

This section seeks to identify the key risks associated with continued provision of services encompassed within the SDM. This is a qualitative analysis that identifies the key opportunities and risks associated with sustaining each service that represents a critical component of the SDM. The following Figure is an abstract from the service system analysis of the Holland GreenTech analysis in Rwanda.

Figure 1: Illustrative example of service system resilience analysis



3.0 Market system level assessment

- This lens seeks to understand the extent to which the SDM addresses priority system-level constraints, thereby contributing to the ability of the system to absorb shocks and stresses.
- Involves the assessment of three key aspects: (1) system characteristics; (2) vision of system change; and (3) system dynamism and robustness.
- The lens aims to enable business champions to better understand the implications and risks in maintaining SDM services and service provider partnerships and help SNV identify and prioritise dynamics beyond the business champion where CRAFT support could help mitigate system-level risks.

3.1 Framework for (rapid) systems analysis

The framework below breaks down each element of systems analysis into key criteria and research questions designed to capture and define the essential elements of model resilience on the ground. It outlines a 'rapid' systems analysis process, building on wider systems analysis experience and guidance.

Element	Criteria	Key questions	Reference frameworks ²
The system <i>Key characteristics</i>	System boundary	Outline the system and key functions around the value chain, including: <ul style="list-style-type: none"> • Core market system functions and actors from production to the market and their roles • Supporting functions and actors, what do they offer, and who pays for those services • Enabling environment functions and actors, what do they offer, and who pays for those services 	The market system
	System constraints and opportunity analysis	Prioritise opportunities and constraints in the 'system' facing smallholder service delivery: core, supporting functions, enabling environment: <ul style="list-style-type: none"> • Bundled services: identify and describe services/products where there is mutual dependency across multiple players • Mitigation services: where service innovation embeds means to mitigate system constraints, e.g., service provider extension • Complimentary services: those identified in the business case falling outside SDM scope and requiring CRAFT service delivery 	System constraints analysis

² The Springfield Centre (2015) The Operational Guide for the Making Markets Work for the Poor (M4P) Approach, 2nd edition funded by SDC & DFID

System vision

Alignment between system constraint priorities and SDM service focus

Partnerships and dependencies

- How does the SDM service portfolio/bundle and service provider partnerships respond to the identified systemic opportunities and constraints analysis? Have all potentially critical partnerships been identified?
- Is it clear who will do and pay for each service / function in future?
- How have service providers been identified? How has the co-creation process influence partner selection?
- What, if any, service provider risks does the business case identify and how are these mitigated?
- What, if any, functions / support services are dependent on direct project-funded support?

The sustainability matrix

Function / role	Current picture			Realistic diagnosis:	Future picture	
	Who does?	Who pays?	What is wrong with performance?		Who will do?	Who will pay?
Core function				Incentives? Capacity? History? Momentum?		
Supporting functions						
Rules						

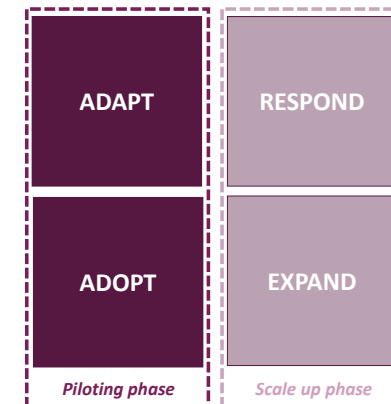
System dynamism / robustness

Capacity of system to continue to provide (and evolve) services

Strength of system 'business case' / rationale

- For each key SDM service / service partnership:
- Is there a valid business case for all service providers (e.g. input suppliers, extension providers, etc)?
 - What is the expected timeline for realising benefits for service providers?
 - Does the innovation compliment respective service provider's business strategy?
 - Does the business champion have ambition to expand services in the way the innovation allows?
 - Does the business champion and/or service providers have a track record of innovation and investment in the area of the innovation?
 - Are there signs the business champion has or is pursuing external funding partnerships as a business strategy in itself?

System change framework (Ownership)



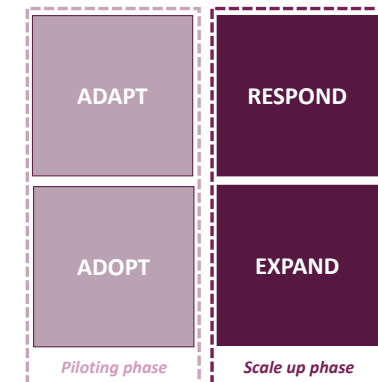
Potential for service replication

Is there any evidence that key services / functions can be scaled in line with the SDM growth ambitions:

- by the same supporting system players (to more farmers for the same or other crops and/or geographies)
- by other market actors in same or different geographies"

What strategies are proposed to stimulate wider uptake and replication of key services / functions?

System change framework (Scale-up)



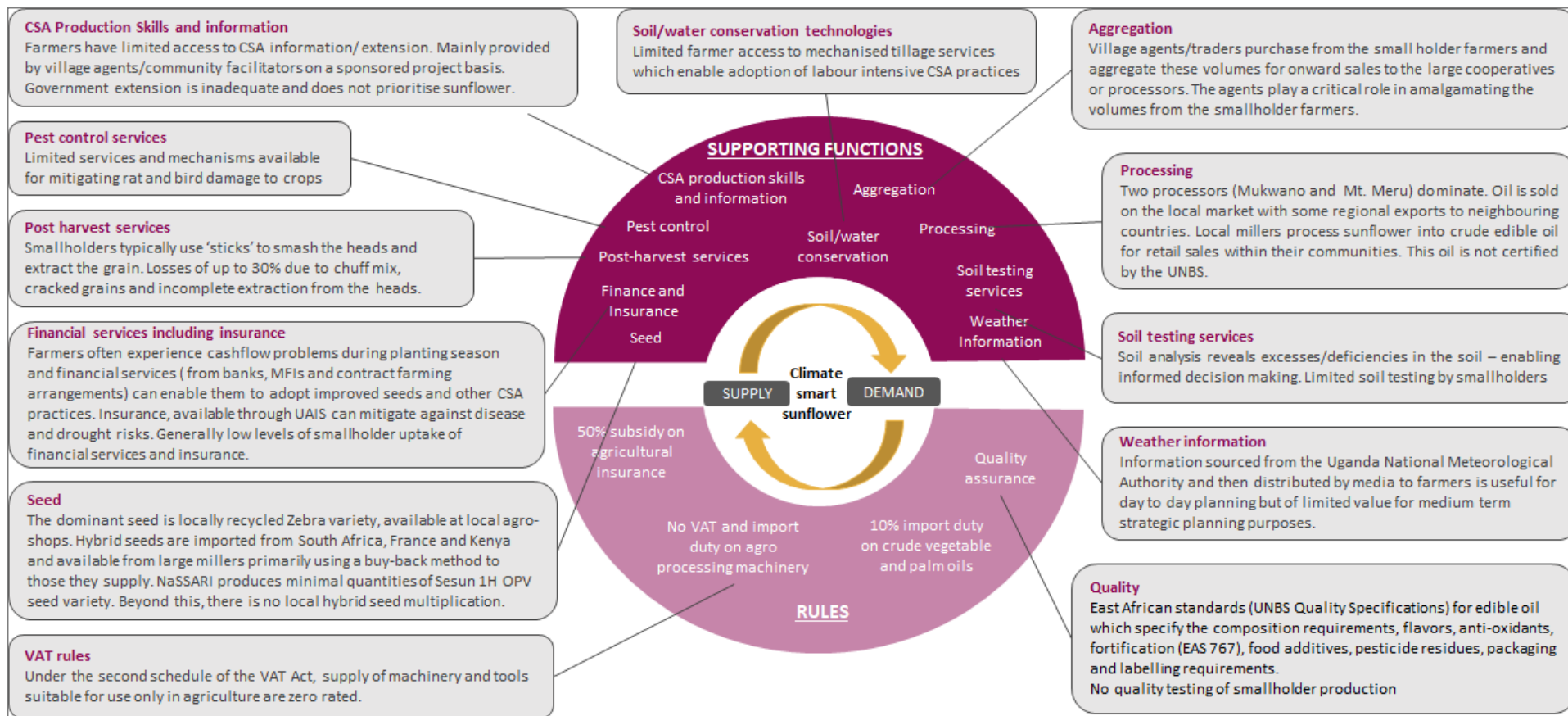
3.2 Rapid systems analysis – reporting guideline

Following a rapid market system analysis, the following section provides guidance on the interpretation and presentation of information generated in order to establish a valid picture of the SDM services and system context in which they operate and to which the SDM innovation contributes.

3.2.1 Step one: Characterising the system

Describe the important elements that comprise the system including (i) core functions; (ii) supporting functions and services and (iii) enabling environment rules and norms. Specifically, identify those that are significant issues and/or constraints with regards smallholder access and inclusion in the system – providing a summary narrative description of each. The following example is taken from the rapid market scan of Sunflower in Uganda.

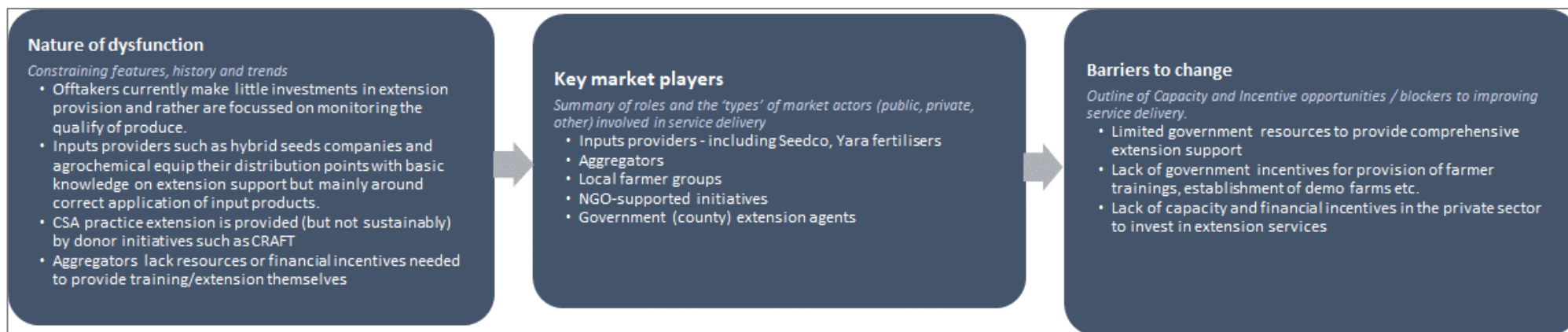
Figure 2: Illustrative system summary



3.2.2 Step two: Detail those supporting functions and/or rules significantly constraining the system, its functionality and efficiency

Prioritising only those supporting functions or rules of significance, elaborate the nature of dysfunction, identify the key players involved and describe the apparent barriers to improving those respective functions. N.B. Consider the incentives and capacities of system actors involved to improve their services / practices. The following example is taken from the rapid market scan of sorghum, Kenya and summarises the nature, players and barriers to extension services in the sorghum sector.

Figure 3: Illustrative elaboration of constraints and the nature of dysfunction



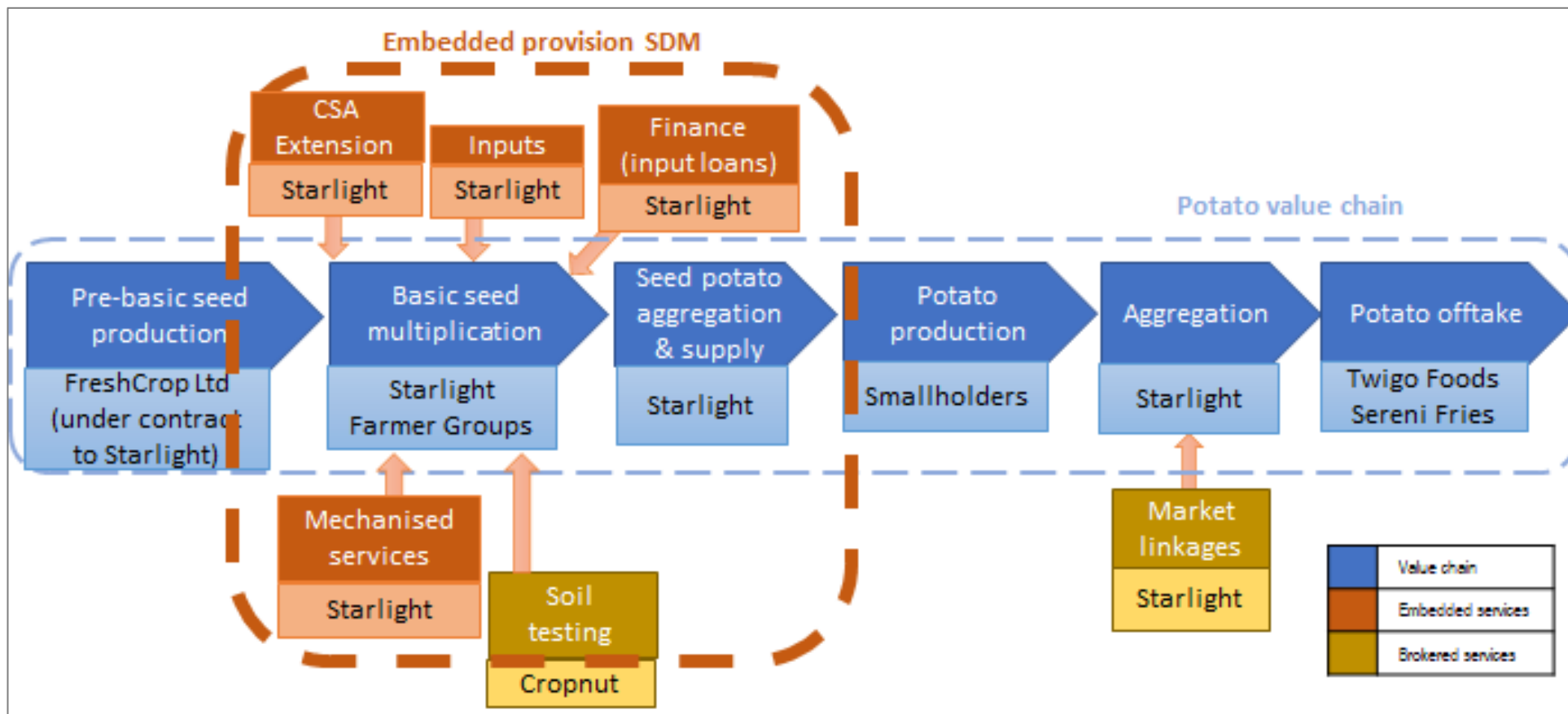
3.3.3 Step three: Depict the scope and set of services that comprise the 'Service Delivery Model' (SDM)

Identify the 'boundary' of the SDM in terms of those services it encompasses. Consider two prevailing variant of service provision, indicating which services are either 'embedded' or 'brokered' as part of the SDM.

1. Embedded (structured) services – are those provided by a BC or contracted service providers as part of the contractual relationship between business champion and smallholders.
2. Brokered (semi-structured) services – are those provided independently by external service providers through preferential access and/or rates negotiated on behalf of smallholders by the BC.

The following example is taken from the market analysis of the potato sector in Kenya, and the SDM of Starlight.

Figure 4: Illustrative SDM

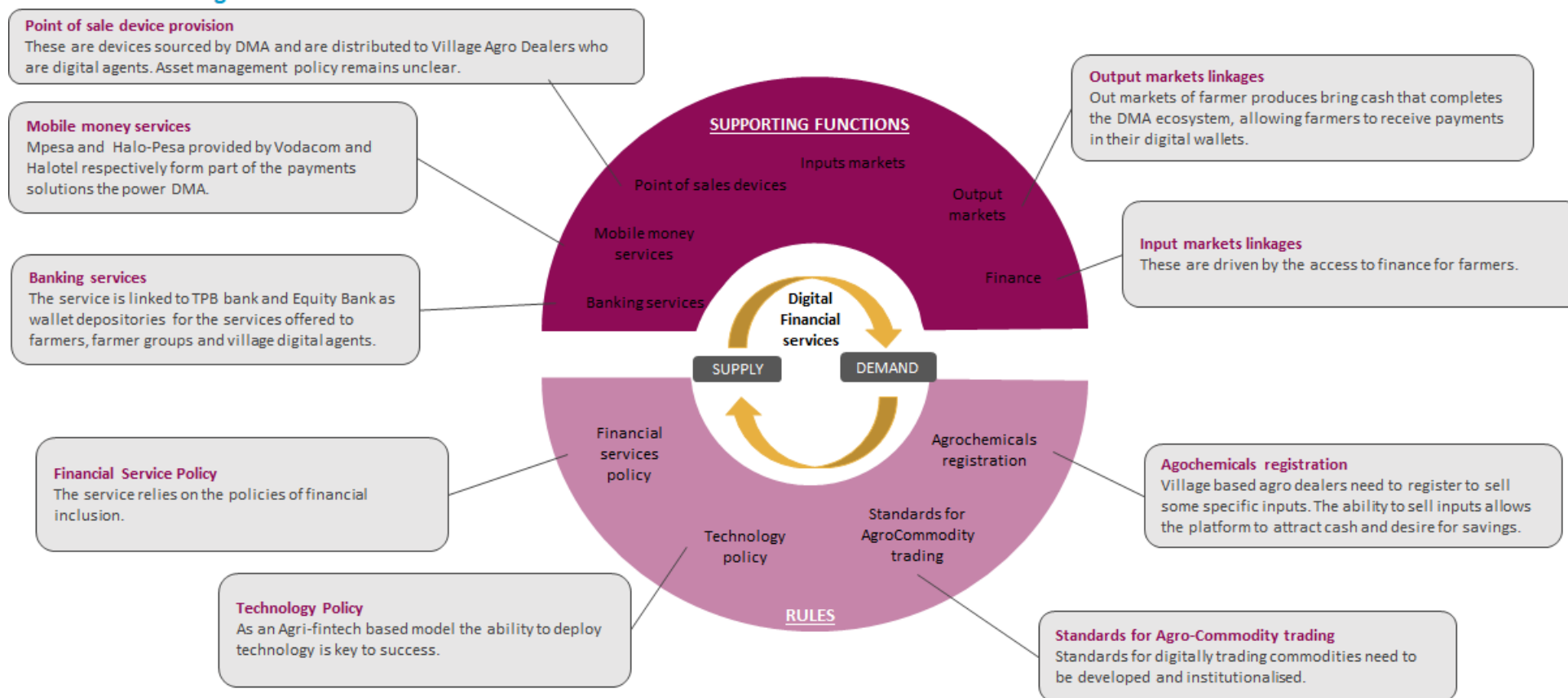


3.3.4 Step four: Detail priority supporting functions and rules and identify the underlying constraints impacting on those supporting 'systems'

Using the 'system' model used under Step 1 above, and for each priority supporting function / rule identified, develop a 'system' picture for each, identifying those elements of these (supporting) systems including the (i) core functions; (ii) supporting functions and services and (iii) enabling environment rules and norms. Identify only those functions and rules that represent significant constraints and provide a summary narrative description of each. The following example describes the support 'system' of digital financial services supporting the SDM of Nondo, Tanzania.

Figure 5: Illustrative 'supporting' system summary

3.21 Finance - Digital Financial Services



3.3.5 Step five: Summarise the alignment between those system priorities identified, and the SDM

Conclude the rapid scan by comparing the system -level constraints identified and prioritised, with those services the SDM seeks to provide and around which it proposes to innovate. Identify any key services/functions that remain unaddressed at system-level and which, therefore, continue to represent a constraint to smallholders and a risk to system resilience. Figure 6 provides an example of an assessment of the alignment between constraints faced in the sunflower sector in Uganda, and the SDM model developed by Sebei.

Figure 6: Illustrative summary of SDM alignment with systemic priorities



Access to improved seed – Sebei has procured improved seed from Ngetta and Mukwano and also Morica Seeds. The varieties are PANA, Agsun, Sesun and Fedha which all have better yield capacities compared to the local variety. Only 1,000 farmers could access seed in season 1 of 2021 with potential demand of up to 10 MT of seed only being met with actuals of 1 MT. Key reasons for this are a) the high cost of seed and farmers with limited cashflow; b) some trust issues as a result of unresolved germination rates for PANA; and c) disruptions to supply for a variety of reasons including Covid.



CSA Extension – the model has delivered extension services through 5 (recently reduced to 3) employed full time extension services agronomists whose salaries are paid by CRAFT. The agronomists collaborate with the ToTs/Agents (75 active ToTs and 32 agents). Extension services (training and demo plots) are funded by CRAFT and may not be sustained beyond the programme. The organ has also trained 33 village agents/ToTs



Soil Testing is one key area the SDM does not address. There is a knowledge gap within Sebei on how and who to approach on this. There are also no service providers in the whole region, limiting the prospect of initiating the information and knowledge transfer.



Access to finance is a key obstacle to farmers implementing CSA practices in particular adopting improved seeds. Sebei SACCO offers credit to a reportedly limited number of sunflower farmers (numbers not available). Others can opt to take agricultural financing from Centenary bank (which have more difficult application processes). Financial inclusion (account opening and financial literacy) is also provided by the bank with accounts opened with as low as Ugx 3,000 initial deposit and agent banking services able to initiate loans and account opening.

4.0 CSA / GAP Outcome Level Assessment

- This lens seeks to understand the extent to which the services provided through a SDM result in sustained behaviour change by smallholder recipients and thus lead to practice change outcomes that are resilient.
- Involves the assessment of three key aspects: (1) relevance of CSA/GAP outcome; (2) likelihood of smallholder uptake of service(s); and (3) extent of outreach and potential for service(s) uptake at scale.
- The lens aims to help business champions better assess the market potential for CSA/GAP services and strengthen SDM business strategy accordingly, and guide SNV in identifying the drivers and blockers of SDM adoption and outreach.

4.1 Framework for CSA/GAP outcome analysis

The framework below breaks down each element of the outcome analysis into key criteria and research questions to be assessed to capture the scope and prospects for impacts on smallholder practices.

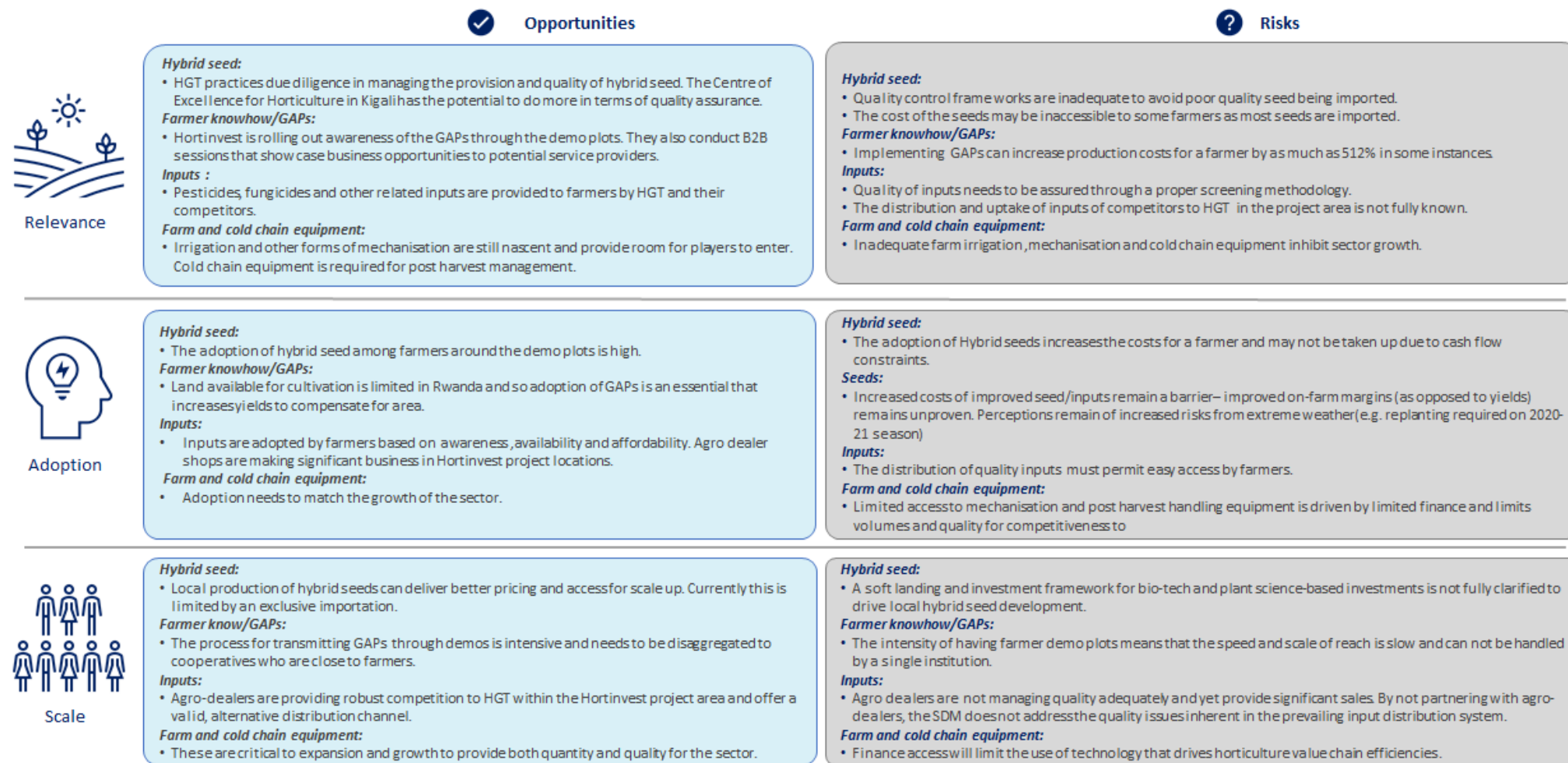
Element	Criteria	Key questions	Key aims of assessment
Relevance <i>Is there a valid and significant GAP outcome?</i>	Nature of CSA/GAP challenge(s) SDM aims to address	<ul style="list-style-type: none"> • Describe the CSA/GAP productivity outcome from GAP? <i>Specify primary & secondary aim outcomes where appropriate</i> 	<i>Confirmation that the SDM does address itself to <u>significant</u> CSA/GAP challenges</i>
	Significance of CSA/GAP challenge (and its resolution)	Categorise the significance (real or potential) of the outcome. e.g., <ul style="list-style-type: none"> • "Significant and urgent" • "Significant and medium-term critical" • "Real but low priority" 	<i>Comparative assessment of <u>how significant</u> the CSA/GAP challenge being addressed is</i>
Adoption <i>What is the likelihood of sustaining smallholder behaviour change?</i>	Demonstrated understanding of the CSA/GAP challenge	<ul style="list-style-type: none"> • Provide assessment of whether the business case provides a clear and compelling argument for its CSA/GAP relevance • Provide assessment of whether the BC demonstrates understanding of the links between the CSA/GAP challenge and SDM innovation 	<i>Confirmation that the business objectives of the BC are driven by adequate recognition of the CSA/GAP challenge facing smallholders</i>
	Strength and clarity of 'business case'	<ul style="list-style-type: none"> • To what degree does the innovation have the potential to positively impact smallholder? • Is there a valid business case for smallholders? Specify: <ul style="list-style-type: none"> • <i>What are the expected farmer investments (time, money, etc) and are they one-off or recurring? "</i> • <i>What is the expected timeline to realising benefits? Short, medium, long-term?</i> 	<i>Confirmation that the commercial business case for smallholders in adopting CSA/GAP practices is valid, quantifiable and recognisable</i>

Scale <i>Will change impact on large numbers of smallholders?</i>		<ul style="list-style-type: none"> • What is the evidence farmers do/will recognise the benefits of specific GAP opportunity? 	
	Strategy for farmer uptake	<p>Identify the key practices/behaviours the CSA/GAP service seeks to change and specify for each:</p> <ul style="list-style-type: none"> • What is the current behaviour that needs to change? • What is it that farmers will be expected to do differently? • What are the known threats to adoption of all or part of these changes? <p>What, if any, explicit strategies / tactics are proposed to stimulate / promote behaviour change?</p>	<i>Confirmation that the nature and extent of behaviour changes expected of smallholders is understood and achievable</i>
	Number of direct beneficiaries	<ul style="list-style-type: none"> • Estimate number of direct beneficiaries of SDM pilot • Estimate uptake rate amongst direct beneficiaries • Estimate number of potential direct beneficiaries of BC (ie. beyond the pilot) 	<i>Quantification of direct beneficiaries</i>
	Potential for replication	<ul style="list-style-type: none"> • Is there evidence that the CSA/GAP service will positively impact other beneficiary crops? • Are the (compelling) prospects for significant indirect beneficiary impacts (i.e. producers not served by the BC)? 	<i>Quantification of indirect beneficiaries</i>
Potential for crowding in	<ul style="list-style-type: none"> • Are the (compelling) prospects for similar service providers to replicate the CSA/GAP service in this or other crops? • What activities are planned to raise wider awareness of the SDM innovation? 	<i>Confirmation that active plans/strategies exist to promote outreach beyond the BC outreach</i>	

4.2 CSA/GAP outcome analysis – reporting guideline

Following assessment of CSA/GAP outcomes and outreach potential, the information generated by the above research framework should be summarised in narrative form with the aim of quantifying and qualifying the prospects – in terms of both opportunities and risks – for SDM innovation outreach and uptake at scale. The following example summarises the likelihood of sustaining CSA outcomes at scale under the SDM of Holland GreenTech, Rwanda.

Figure 7: Illustrative summary of SDM scale and outreach potential



5.0 Conclusions and Recommendations

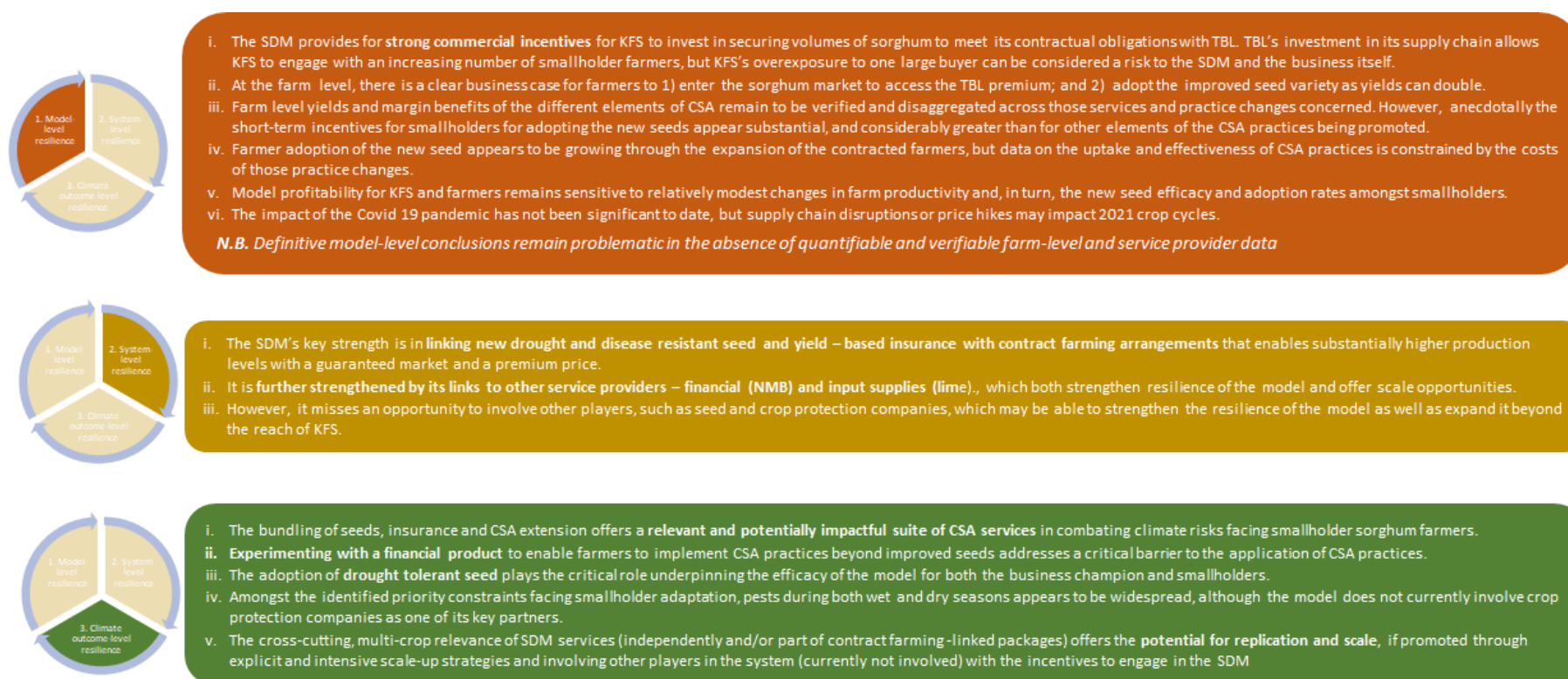
5.1 SDM analysis – reporting guideline

The analysis and reporting should conclude with a section that seeks to draw key findings and provide, where possible, key recommendations for improving SDM resilience with respect to its business model, systemic change contribution and CSA/GAP results.

5.1.1 Conclusions – SDM resilience

A summary of the key findings with regards the SDM under each of the three lenses (i.e., business model, system, and outcome level lenses). These summaries should seek to synthesise not repeat earlier narrative, identifying the critical strengths and weaknesses emerging with respect to SDM resilience. Figure 8 provides an example of conclusions emerging from Kibaigwa Flour Services, Tanzania.

Figure 8: Illustrative SDM analysis conclusions



5.1.2 Conclusions – actor resilience

The conclusions section should also seek to draw out the extent to which the SDM supports the actor-specific resilience of key stakeholders involved – namely smallholders, service providers and business champions. This analysis is primarily a qualitative one, and seeks to answer a number of questions designed to explore individual actor resilience building against four key criteria:

Concept	SDM Actor		
	Farmer	Business champion	Service provider
Agency	<i>Evidence of the ability to choose buyers, goods, services, or service providers</i>	<i>Evidence of the ability to choose suppliers, goods, services, or service providers</i>	<i>Evidence of the ability to choose buyers, goods, services, or service providers</i>
Buffering	<i>Evidence that farmers have access to risk mitigating financial services</i>	<i>Profitability of the business champion</i>	<i>Profitability of the service provider</i>
		<i>Total sales of the business champion</i>	<i>Total sales of the service provider</i>
Connectivity	<i>Evidence of strengthened relationships between smallholders and service providers</i>	<i>Evidence of strengthened relationships with smallholders and/or service providers</i>	<i>Evidence of strengthened relationships with business champion, smallholders and/or other service providers</i>
Diversity	<i>Evidence that multiple actors provide key services across the value chain and in relevant supporting services</i>	<i>Evidence that multiple actors provide key services across the value chain and in relevant supporting services</i>	<i>Evidence that multiple actors provide key services across the value chain and in relevant supporting services</i>

5.1.3 Recommendations

The section should conclude with any key recommendations that may emerge from findings and reflections. Structurally, as with 'Conclusions' these are usefully categorised according to recommendations pertaining to improving the resilience of (i) the service model; (ii) the system; and (iii) CSA/GAP outcomes. Figure 9 provides an example drawing from the analysis of Shalem Investments Ltd, Kenya.

Figure 9: Illustrative SDM recommendations

10.0 Recommendations

10.1 Headline Recommendations



Recommendation I: Develop viable strategies for SDM sustainability

- Rigorous sustainability analysis and planning should be applied to each embedded SDM service to identify credible strategies for long-term financing and resourcing beyond any period of external / project support. Sustainability analysis and the development of a pragmatic vision for sustaining critical SDM services is essential and should be used to challenge any/all assumptions made (by the project or its partners) as to the long-term source of technical and/or financial support inherent in the design of a SDM.
- The business champion and its service provider partners should be encouraged to make necessary provision for assuming, between them, the costs and resourcing of those service innovations validated by pilot activities and which can and should be funded from the increased sales generated as part of any SDM. Sufficient in-house staff and investment capacity is critical if business champions and their partners are to maintain and scale SDMs independently. Recognition of these long-term commitments and active provision for them represents an important sign of ownership and commitment to the SDM and underpins its resilience, sustainability and likelihood of being scaled.
- Where CRAFT shares the cost of fundamental aspects of the SDM (e.g. agri-business agent remuneration), it should consider carefully how to strengthen the 'smartness' of its cost-share mechanism with the aim of seeking to leverage long-term investment and replacement of external contributions in order to minimise the risk of reducing the incentive of Shalem or its partners to find a viable financing alternative for agent remuneration.



Recommendation II: Analyse and understand the system-level constraints to CSA provision and uptake at scale amongst smallholders

- Rapid market system scans should be undertaken to identify key system-level challenges to service delivery in order to inform the identification and development of relevant and potentially more resilient SDMs and service provider partnerships. Routine system-level scans would complement and add value to climate risk assessment tools in exploring implementation challenges and lessons learned with respect to service delivery, and identifying mitigation measures and strategies to inform SDM design and development.
- A credible strategy for scaling models and/or lessons learned should be elaborated at the outset of any pilot activities in order to maximise opportunities for wider SDM replication and copying by business champions and their partners. Spontaneous scale, copying or 'crowding-in' of SDM innovations cannot be assumed and invariably requires more strategic planning and decision making by business champions and/or partners. An effective strategy for scale also clarifies the monitoring and information needs of partners in order to secure the management support and inform the investment decisions of SDM partners.



Recommendation III: Prioritise, phase and justify CSA practice changes to maximise smallholder capacity and willingness to adopt

- The iterative introduction and/or promotion of CSA services would facilitate effective investment choices and planning by smallholders and support prioritisation where appropriate (e.g. toward drought tolerant seeds). More strategically targeted and iterative CSA promotion strategies would support step-wise adoption strategies amongst smallholders and increase the likelihood of critical practice and behaviour changes becoming embedded before additional/ complementary adaptations are introduced. Such an approach would enable smallholders to adapt at a pace and level reflective of their unique financial or non-financial realities whilst reinforcing the uptake of priority CSA practices such as drought tolerant seed varieties.
- Business champions should, where possible, be encouraged and supported to better quantify, document and promote the links between specific CSA practices and productivity and margin benefits in order to support advocacy for and reinforce smallholder farmer practice and behaviour change. Tangible attribution of the commercial benefits of specific CSA practices is critical in order both to validate the viability of the SDM but also as the basis upon which to build ownership amongst stakeholders, including smallholders, by evidencing and reinforcing the benefits of CSA to catalyse greater and more widespread adoption.

IMPACT THAT MATTERS



About us

The COVID-19 Response and Resilience Initiative for Food Value Chains (CORE) ran from July 2020-December 2022. Initiated by the Netherlands Ministry of Foreign Affairs and led by SNV, it was set up by to strengthen responses to the COVID-19 pandemic across eight major SNV-implemented agriculture projects in Africa: BRIDGE, CRAFT, HortInvest, Horti-LIFE, TIDE, MODHEM+, PADANE and STAMP+.

Based on field-level demand, CORE selected four themes that capture key structural challenges highlighted by the pandemic across agri-food systems: farmer inputs and services; consumer-oriented strategies; environmental hygiene integration; and digitalisation for agriculture (D4Ag). Each theme contributes to the structural resilience of food value chains and agri-food systems to shocks and stresses.

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