

LEAP Solution Statement Global Resilience Challenge Mercy Corps

<u>Linking Financial and Social Capital to Enhance Resilience of Agro-Pastoral Communities (LEAP)</u>

Region : Niger and Mali Date : 09/15/2015 – 09/14/2017

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EXECUTIVE SUMMARY

Mercy Corps is a leading global humanitarian agency saving and improving lives in the world's toughest places. In more than 40 countries, we partner with local people to put bold ideas into action, help them overcome adversity and build stronger, more resilient communities. Mercy Corps is a leader in putting resilience theory into practice, with over 25 active programs valued at \$175 million that build resilience and break the cycle of crisis. As the lead organization for this consortium, Mercy Corps is pleased to bring together the competencies and experience of Planet Finance, Planet Guarantee, ASUSU SA, Lemonway and Soro Yiriwaso to propose a sustainable approach to strengthening the resilience of vulnerable communities in Mali and Niger by increasing the access of agro-pastoralist households to affordable and appropriate financial products.

LEAP addresses a critical market gap uncovered during the problem statement research phase by bringing tailored, accessible formal financial services to agro-pastoralist households, giving them the ability to anticipate, adapt and recover from the effects of climate-change related shocks in a manner that better protects their livelihoods, reduces chronic vulnerability and facilitates growth. Our strategy to create sustainable, scalable change over this initial period will deliver the following results:

- Initiate and prove a self-sustaining business model to scale financial literacy and entrepreneurship training to agro-pastoralist men and women, allowing them to make informed decisions about their household finances and investments and better manage risk;
- Leverage technology to graduate vulnerable households from informal financial services to demanddriven formal financial services accessible via the mobile phone;
- Introduce reliable buffer capacity through secured savings;
- Unlock access to appropriate credit solutions, including warehouse credit for farmers and tailored credit products for women's groups, and open channels to facilitate remittances to increase and diversify income-generating activities and allow households to meet basic needs in times of stress or shock;
- Develop and test effective insurance products for farmers and herders that reduce the cost of asset losses and spur quicker recovery post-shock.

In the 2-year time frame of this proposal, LEAP will develop win-win partnerships with the private sector to fill critical market gaps, working with mobile money operators, MFIs and insurance brokers, to develop commercially viable financial products and services designed to increase financial inclusion and meet the needs of approximately 50,000 agro-pastoralists in rural areas. We will work closely with private sector partners and agro-pastoralists alike to implement a gender-sensitive, community-centered, innovation-based approach that will increase financial inclusion for vulnerable populations, ultimately serving to increase their food and income security in a context characterized by frequent shocks. In the long term, this collaborative, integrated strategy has the potential to scale to a national level and beyond, reaching 200,000 agro-pastoralists over a 5-year period.

In the vulnerable Sahel region of Mali and Niger, increasing climate variability makes this an urgent request, particularly for agro-pastoralists who face high barriers to access crucial financial services. The LEAP team requests an investment of \$3 million in order to deliver sustainable change to build the resilience of 50,000 vulnerable agro-pastoralist households in Mali and Niger. By engaging the private sector to deliver products and services and leveraging investment from the private sector partners to eventually scale, innovate and replicate the model, LEAP will deliver a significant, sustainable return on this investment, representing excellent value for money.

SECTION 1: PROJECT DATA

Project Name: Linking Social and Financial Capital to Enhance Resilience of Agro-Pastoral Communities (LEAP)

Region: Gao and Mopti Regions, Northern Mali; Tillabéry Region, North West Niger **Lead Organization:** Mercy Corps, a 501(c)3 organization registered in the United States

Target Start Date: 15 September 2015 Target Finish Date (Phase 1): 14 September 2017

Matching Funds: n/a

SECTION 2: INNOVATION AND IMPACT PATHWAY

2.1. SOLUTION STATEMENT AND THEORY OF CHANGE

In the Sahelian Regions of Mali and Niger, increasing climatic variability, characterized by inconsistent rainfall, frequent drought and extreme weather events such as floods, has outpaced the capacity of agro-pastoralists to

adapt to and cope with these effects. In regions confronted by weak governance, conflict, and increasing pressure on natural resources and the natural ecosystem, pastoralist livelihoods are becoming less reliable and traditional coping and adaptation strategies less viable. In this context, rural agro-pastoralist households, which constitute 87% of Niger's population and 71% of Mali's, are more prone to adopt adverse and unsustainable coping strategies in times of stress or shock, such as selling productive assets, skipping meals or taking children out of school, strategies which increase vulnerability and undermine long-term resilience.¹

Mercy Corps' research within and outside of the Sahel (e.g. Niger and the Philippines) has demonstrated that access to Financial Coping Mechanisms (FCM) is a key resilience capacity in areas prone to climate shocks. Yet, as explained in LEAP's problem statement and demonstrated by research during the problem and solution development phases, the inadequacy of FCM that

Financial coping mechanisms can be defined as financial tools or mechanisms that households/communities have at their disposal to meet their financial needs and to protect their assets in the face of shocks or disasters. They can be formal or informal, accessible or not, expensive or not, made in kind or in cash. FCMs can be positive or negative for the populations that utilize them.

are inclusive, reliable, and appropriate in a context of recurrent crises and shocks prevents agro-pastoralist communities in the Sahel from securing their financial capital and from developing diverse economic activities that will support their resilience. Households currently use a number of informal FCM that are not effective to secure financial capital or investments, to manage debt and to mitigate risks. Formal financial services (banks, MFIs, insurance brokers) are limited in rural areas, and limited education and low financial literacy, strict conditions of opening an account and collateral requirements, and high cost and long distances to MFI offices constitute significant barriers to access. Women encounter more pronounced barriers to access credit and other formal financial services, as deep-seated cultural barriers limit their mobility, prevent them from owning and controlling productive assets, and limit their engagement in certain income generating activities.

LEAP's theory of change considers that access to appropriate and tailored FCM will allow vulnerable agropastoralists to secure financial capital, increase investment in new economic opportunities, and better manage financial resources and anticipate risk, enabling households to increase their resiliency to shocks and stresses and speed recovery. Ultimately, LEAP seeks to transform the financial services sector in the region so that it serves the needs of rural agro-pastoralists and actively contributes to building resilience, resulting in increased food and income security for vulnerable populations.

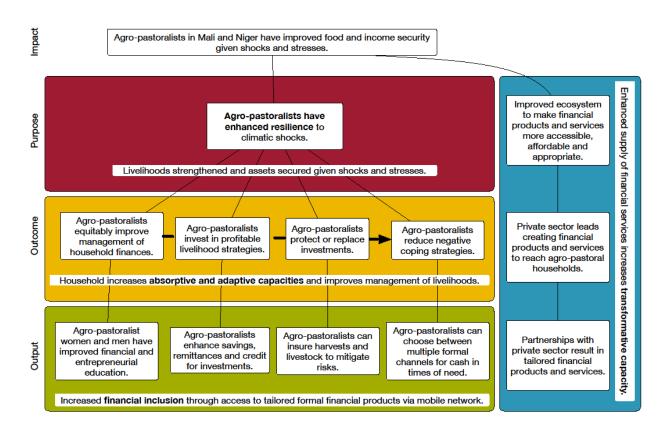
In the 2-year time frame of this proposal, LEAP will develop win-win partnerships with the private sector to fill critical market gaps, including mobile money operators, MFIs and insurance brokers, to develop commercially viable financial products and services designed to increase financial inclusion and meet the needs of approximately 50,000 agro-pastoralists in rural areas. LEAP will catalyze rapid development and adoption of new products and services by addressing both supply and demand side constraints. We will strengthen the capacity of the financial sector to innovate, design and deliver targeted financial services for agro-pastoralists

that build on traditional community systems for coping with drought-related shocks, while building demand and use of financial products through targeted consumer education.

Over a potential 5-year project lifecycle, LEAP will create sustainable, scalable transformation of the financial services ecosystem, creating a culture where financial service providers are supported to innovate and replicate proven services. This dynamic ecosystem will stimulate household consumption, driving market actors to improve the quantity and diversity of goods and telephone operators to improve their network coverage, thereby delivering transformative change through a dynamic private sector poised for future growth. Ultimately, the project will impact an estimated 200,000 agro-pastoralists (target 60% women) in targeted regions, helping to secure their livelihoods and enhance their resilience to adapt to and cope with shock, and ultimately improve their food and income security in the face of increasing vulnerability.

2.2. IMPACT PATHWAY DIAGRAM

LEAP will support vulnerable households to adapt new behaviors to better mitigate and manage risk, as they move through the following pathway to change: (i) With financial literacy, households improve equitable management of finances, use a mobile phone, open a mobile money account and build confidence in mobile money services; (ii) With access to mobile money, people will secure their savings, subscribe for insurance products and have the ability to directly receive remittances; (iii) With access to digital financial services, people will use a diversity of financial products and services, driving financial inclusion; (iv) Financial services access will enable clients to invest in profitable livelihood strategies, protect or replace their investments after shocks, and to use multiple channels to access cash in times of need; (v) As a result, households increase absorptive and adaptive capacities and reduce negative coping strategies, resulting in enhanced resilience (see Annex A). As households adopt and use appropriate FCM, the private sector will increasingly innovate accessible, affordable and appropriate products and services to better meet client needs. What results is a mutually reinforcing cycle of supply and demand that allows agro-pastoralists to strengthen livelihoods, manage risk and secure assets, making them less vulnerable to climate shocks.



2.3. INNOVATION AND IMPACT

Impact: A number of recent studies have demonstrated linkages between access to formal and informal financial services and enhanced ability to cope and recover from shocks². LEAP seeks to further test this theory of change to understand how access to a variety of tailored, adapted and culturally appropriate formal financial services can help rural households in the Sahel to better cope and adapt to climate-related shock. As a result of using financial products and services tailored to their needs, it is anticipated that 50,000 agro-pastoralists in Sahel regions will strengthen their livelihoods and secure their assets, making them less vulnerable to climate shocks and building household resilience. Through use of credit products (warehouse credit, group loans), agro-pastoralists will have the ability to invest in diversified income generating activities that increase income and spread risk at the household level, while access to risk-management services (savings, remittances, insurance products) will help agro-pastoralists absorb and adapt to shocks without resorting to negative coping strategies. Ultimately, access to an improved financial services ecosystem builds stronger local economies that bounce back faster in the face of unexpected shocks.

Innovation: LEAP will use mobile money technology to increase accessibility of financial services in areas that have traditionally been unable to access financial services due to their rural location. By supporting private partners with an up-front investment in developing innovative mobile services, LEAP will enable them to expand their client base and benefit from economies of scale, more efficiently reaching clients with new services and products throughout the two countries. Additionally, products such as financial education through customized local language voice messaging will facilitate access to financial literacy tools. Over the first two years, partners will understand the potential of mobile technology to more efficiently deliver new products and services in rural and distant areas, while significantly reducing delivery costs compared to traditional service models, with their greater expenditures on operational and personnel costs. While the mobile phone requires training and support to ensure that vulnerable populations, in particular those with low literacy levels, are able to access the services and are not exposed to risk of fraud, ultimately mobile technologies bring innovation and opportunity to rural clients who are otherwise considered inaccessible or costly to service.

Financial institutions are not innovative by nature; products are generally not flexible and are often developed with the mass market in mind. LEAP seeks to demonstrate to its partners the market opportunities available in rural areas, through flexible, tailored products designed to meet the needs of rural clients (See Annex C for detailed descriptions of each product). Products will be rigorously tested during the 2-year 'catalyzation' phase, with the goal of proving commercial viability and impact for clients. These proof points will serve as a basis for further innovation and scaling during the 3-year 'scaling' phase. It is anticipated that of the estimated five products piloted, at least three will be demonstrated to be financially viable and can be offered on a larger scale moving forward. The result of learning and implementing alongside these partners will lead partner MFIs and other service providers to better understand the product innovation process, customer needs and preferences, and how to develop and invest in customer-centric products geared towards agro-pastoralists.

Scaling: Over the five-year horizon, the project will strengthen the financial services ecosystem in rural areas of Mali and Niger, leading to a diverse offering of financial products and services specifically tailored to the financial needs of agro-pastoralist communities. A sustainable and dynamic ecosystem is only possible if a critical mass of customers is reached, in order to give incentives to financial service providers to offer a broader range of services. By building demand and usage of services and working with partner financial service providers to strengthen the supply of products available, LEAP will work on both sides of the spectrum to build up the financial services ecosystem, resulting in transformational and sustainable change in the way that financial services are used. Successful products will be scaled to the national level through targeted support to partners, while new products and services will continue to be developed during the 'scaling' phase in response to customer need and demand. There is significant potential in replicating products beyond Mali and Niger, to countries with similar agro-pastoralist or rural farmer demographics.

Assumptions: The success of this approach assumes that with technical and catalytic support, the private sector has the interest and capacity to develop new products to reach rural areas should demand increase, and will depend on proof points demonstrating viability. It also assumes that as rural customers become more financially educated and understand product offerings, including through testimonials of peers, they will have the knowledge and willingness to try these services; this assumption is supported by our initial research. A critical assumption of LEAP's theory of change is that increasing women's access to and control over financial capital and decision-making of household finances through the use of gender-sensitive, appropriate financial products and services will improve the resilience of the household.³ This will require the products to be carefully designed with local populations and customs in mind, and to be culturally acceptable for both men and women to use. The approach will be paired with extensive community engagement around gender equity and financial inclusion.

Value for Money: Through strategic and targeted investments in technical support, product development, distribution channels, marketing and scaling, LEAP will leverage the GRP investment to deliver a range of products well beyond the value of the investment, with direct impact reaching an estimated 50,000 agropastoralists in targeted regions after two years, and the opportunity to scale up proven approaches to the national level in Mali and Niger, reaching at least 200,000 new clients. GRP investment will also catalyze further investment from the private sector, during the 2-year initial project cycle and beyond, creating a return on investment that far out-strips the initial value of the investment. By creating scalable and replicable financial products and services, building an ecosystem where innovation and new product development is accepted and rewarded, and catalyzing behavior change on the part of both clients and service providers, investment in LEAP will deliver excellent value for money. Integrated learning opportunities and broad dissemination of lessons learnt will promote scaling beyond the target countries. Key value for money indicators are noted in the Value for Money section below.

2.4. OUTCOMES

| Outcome | Change anticipated: 2 years | Change anticipated: 5 years | Impact on resilience |
|---|--|--|--|
| Access to remittances, formal savings and credit products will allow households to secure savings and to meet basic needs in times of shock or stress. | -30,000 Individuals shift from entirely informal services to enroll in and use at least one formal financial serviceGreater privacy and control of mobile transfers compared to manual cash transfers shifts intra-household decision-making in favor of women. ⁴ | -80,000 individuals experiencing shocks reduce asset/investment loss, and meet consumption needs during the failed season. | -Increased capacity and tools to manage finances allows agropastoralists to smooth volatility in income and spending and to avoid negative coping strategies by enhancing their ability to absorb, adapt and recover faster from shocks as they occur. |
| Gender-sensitive financial education will improve the equitable management of household finances, helping families to better manage resources and risk. | -50,000 Individuals improve financial decision-making to better manage resources and risk20,000 Women have an increased sense of security and empowerment. | -200,000 Individuals improve financial decision-making to better manage resources and risk80,000 Women gain greater income control due to confidence and utilization of new financial products and | -Households improve management of resources and risk, and better understanding how sound financial management can diversify risk and improve capacity to cope with shocks and stressesHouseholds in which women take a more active role in decision-making and management of assets have been shown to reduce poverty and to |

| | | services. | be more resilient. |
|--|--|---|--|
| Access to credit and targeted savings/remittance products will enable agro-pastoralists to invest in diversified, profitable livelihood strategies to increase household income and savings and diversify risk. | -15,000 individuals increase investment in multiple income generating activities, expanding beyond a single-activity approach. | -40,000 individuals face lower volatility in income and expenses due to diversification of investments. | -Households with increased income and diversified income generation strategies are less vulnerable to individual shocks and more able to cope with income volatilityEconomic opportunity builds stronger local economies that bounce back faster when something unexpected happens. |
| Index-based insurance products will help to protect households against loss, allow them to more quickly replace productive assets, and ultimately give them more confidence to invest in agro-pastoral activities. | -5,000 new clients enroll in insurance products. | -20,000 Agro-pastoralists are able to replace lost productive assets during a failed season without resorting to negative coping strategies. | -Agro-pastoralists recover lost assets and recover faster from economic effects of severe weather. |
| Financial service providers diversify and deliver affordable and appropriate products and services to rural clients. | -Four partner financial service providers have skills and resources to market products for rural clients. | - Business models are proven for targeted prototypes and providers create 4 new innovative products and 2 new channels to disseminate them to rural agropastoralists. | Seeing the relevance of rural markets, financial service providers continue to develop, adapt and market products tailored to rural areas and low-income clients in Mali and Niger, and the agent network will continue to grow to reach more rural and distant locations, providing more vulnerable farmers with financial services access. |

2.5. NEXT USERS AND USE

Research conducted in Mali and Niger during the solution development phase demonstrated strong interest by potential clients in formal financial products and tools, as well as interest in using mobile tools to receive information, help secure savings, access credit and a very strong interest in insuring assets. The table below shows how the products have been designed with the needs, barriers and incentives of users in mind, and how the use of specific products will contribute to achieving project outcomes.

| Product | Users | Need | Barriers | Strategy to Reach Users | Outcome | |
|--|-----------------------------|------------------------|-------------------------|----------------------------|-----------------|--|
| Financial All agro- Understand: Low | | Low level of | Develop network of | Agro-pastoralists | | |
| and pastoralists in 1) How to better e | | education; limited | village agents, village | improve financial | | |
| entrepren targeted manage house | | manage household | literacy and digital | intellectuals and | decision-making | |
| eurial areas, with finances and assets lit | | literacy; social | partner agents to | to more | | |
| education particular in the | | in the face of | constraints that limit | carry out face-to-face | equitably | |
| | attention to | stress/shock; | women's access to | financial literacy | manage | |
| | the specific 2) What formal | | education and | training; complement | resources and | |
| | needs of | financial services are | information and their | with voice messages | risk. | |

| | women | available and how to access them; 3) Advantages of equitable management of household resources. | role in managing household finances. | and SMS-based quizzes in local languages. | Women increase control over income and improve financial management. |
|---|---|--|--|--|---|
| Group Savings and credit via mobile phone | Men and women organized in VSLAs or farmer groups with focus on women (target: 70% women) | Increase the financial capacity of the group and the value of loans available to members; Give legal recognition to the group; Give women greater control over income. | Mistrust in financial providers and new technologies; low and unpredictable income; rural areas are traditionally difficult for MFI agents to access, and therefore expensive to service; limited collateral or credit history prevents access to loans; women cite financial barriers to phone and SIM ownership. | Lending decision will be based on group's history of reimbursement and good management, as certified by village agents; social pressure to reimburse loans due to existing group social capital. Network of village agents will be developed to train VSLAs and support groups to use mobile money accounts, and group phone ownership will overcome initial financial barriers. | Group members increase investment in profitable and diverse livelihood strategies. Increased female empowerment through increased capital for female entrepreneurs. |
| Commitm ent savings account via mobile | Agro- pastoralists who wish to invest in an income generating activity or other designated need | Ability to safely secure savings or receive remittances to contribute to financial goals | Mistrust in financial service providers and new technologies; low and unpredictable income; family pressure to share excess cash throughout social network, which undermines individual financial goals; culture values immediate consumption spending over saving. | Designated accounts allow users to safely secure money in a confidential way; designated savings accounts for specific projects can encourage an increase in remittances; financial literacy training will address cultural issues around family pressure to share revenue and immediate consumption over saving. | Agro-pastoralists invest in profitable livelihood strategies, increase savings for use in times of shock or stress and decrease negative coping mechanisms |
| Warehous e credit | Agricultural producers organized in associations | Farmers need access to buffer capacity to be able to sell production at opportune times, rather than at harvest when prices are lowest. Stored agricultural goods | Farmer associations are not well organized and don't practice best storage practices. Warehouses do not exist in all locations. Volatility of cereal markets and limited | Initially target villages where farmer groups are better organized and can access a warehouse (often those who have been supported by an NGO), and use experience to | Farmers increase income through sale of agricultural production; are able to invest in profitable offseason livelihood |

| | | serve as collateral for loans which ease consumption until commodity prices increase. | production surplus. | demonstrate value of model to other farmer groups (multiplier effect) | strategies |
|---------------------------------------|--|---|---|---|---|
| Index based micro- insurance | Agricultural producers and livestock owners | Tools to manage and mitigate risk of recurrent climatic shocks, especially to recover lost assets | High cost of premiums due to high risk of climatic shocks; lack of familiarity/understa nding of insurance products and aversion to invest in risk mitigation at the expense of immediate consumption | Couple financial education on insurance products with roll-out of new products; will target subsidies to underwrite costs of testing new products | Agro-pastoralists protect or replace investments or lost assets following drought |

The stakeholder analysis map (Annex B) explains the stakeholders' roles and connections to success in LEAP, demonstrating the various sectors of participation required for long-term success.

2.6. Outputs

Building on the prototypes suggested during the problem statement phase, LEAP undertook a series of consultations with potential users of these products and services, and conducted product design workshops with project partners to develop technically feasible and financially viable product solutions. During implementation, LEAP will develop, test, and iterate on these prototypes to best meet client needs, encourage uptake and financial viability. See Annex C for a detailed explanation of each prototype.

1) Financial Literacy and Entrepreneurship Training. LEAP will develop and pilot a financial literacy curriculum adapted to the specific needs of agro-pastoralists with limited education, which integrates a messages about how financial services can enhance resilience. Training will be conducted face-to-face (by village agents, village intellectuals and agents of partner MFIs and MNO), and will be complemented by an engaging series of voice messages in a soap opera style (drama following a family and their use of financial tools and services) delivered over vocal SMS to reinforce the teachings and make them accessible to illiterate populations. SMS-based quizzes will be administered after each call to measure comprehension. Rigorous evaluation tools will be used to understand the impact of financial literacy in increasing adoption of products and services, and these linkages will be shared with partners as proof points to encourage adoption and replication of bundled financial literacy tools with other financial services. Once tested, financial literacy tools will be packaged and made available for reuse by our private sector partners, extending their impact through replication and scaling.

During the 2-year catalyzing phase, financial literacy activities will achieve the following outputs:

- ❖ 50,000 agro-pastoralist men and women have improved financial and business development skills after receiving financial literacy and entrepreneurship education face-to-face and by voice SMS
- 30,000 individuals open a mobile money account and make a transaction at least once every 90 days
- 2) Digital savings and credit products. To drive financial inclusion, LEAP will develop and test a number of digital savings and credit products, providing options to address the lack of accessible savings opportunities that offer both safety and liquidity, and barriers to accessing credit.
 - a. **Group savings and credit via mobile.** Women who are organized in Village Savings and Lending Associations (VSLAs) and farmer groups will be supported to undertake group-based savings and

lending activities and will be linked to partner MFIs to access group-based loans. Experience from CARE shows that VSLAs linked to MFIs show higher per-member rates of return on savings and higher average savings balances than non-linked VSLA members. Group loans will be awarded based on proof of repayment history, overcoming barriers such as collateral requirements, and will be more economical for the partner MFI to service than individual accounts. LEAP will innovate on the well-tested Village Agent model to prove a financially viable hybrid model linked to the private sector.

- b. **Commitment savings accounts via mobile.** Mobile money account account holders will be able to create a savings account designated for a specific purpose, such as starting an income-generating project. The account will allow holders to save funds when income is plentiful, prevent loss of funds to social networks over time, and give access to funds at future dates when the need is great. Based on LEAP interviews, designated accounts can reassure family members sending remittances that funds will be used for designated purposes, which could encourage an increase in funds sent.
- c. Warehouse credit. A warehouse credit product will be developed for agricultural producers, which will encompass rain-fed and vegetable market production year-round, and will be administered via mobile money accounts. The warehouse credit will allow farmers to use their stored agricultural goods as collateral to access loans, allowing them to meet consumption needs and invest in off-season income generating activities just after the harvest, when prices are low, and to sell later in the season, when prices increase. Soro Yiriwaso recently conducted a pilot of a warehouse credit system and found that participants were able to increase incomes by 40% through use of the product.

Together, savings, remittance and credit products developed by the project will produce the following outputs:

- ❖ 15,000 individuals use savings linked to a financial service provider (50% female adoption)
- ❖ 8,000 women receive credit with 98% repayment rate
- ❖ 4,000 farmers receive warehouse credit with 95% reimbursement rate
- At least 80% of clients report formal products are better suited than informal products
- ❖ 80 agents promoting newly developed financial products and services
- **3)** Index-based micro-insurance for agricultural producers and livestock owners will help agro-pastoralists protect and replace investments following shocks. Cereal crops, particularly millet and sorghum, are the main source of income and of nutrition for smallholder farmers in the region, but are very sensitive to recurrent climatic shocks. Cattle are a key savings mechanism and income generation activity in the region. Climate change shocks and armed conflicts have increased the risk of cattle mortality thereby threatening farmers' financial resilience. Crop and cattle micro-insurance specifically designed for low-income farmers has proven to be an efficient method to mitigate such risks. The proposed product is a micro-insurance policy offered by an insurance company and distributed through value chain actors for increased outreach and reduced overhead costs. LEAP's proposed insurance products were designed to meet farmers' individual needs while using a low cost index-based approach to reduce delivery costs. Because insurance is a new concept within the target area, it is anticipated that uptake will be slow, but will increase over time as farmers and herders build trust based on evidence of indemnity payment.

It is anticipated that tailored and adapted insurance products will achieve the following outputs:

- 5,000 individuals use insurance products to mitigate risks with 60% policy renewals
- 4) Private Sector develops financial products and services. At the financial service provider level, it is anticipated that partnerships with the private sector will result in tailored financial products and services delivered over the 2-year project period, with learning, innovation and experience incorporated into product replication and scaling after the program end. Full time staff from the MFIs will be assigned to the development of new products and their testing for acceptability, profitability and sustainability. Upfront

investment in technical capacity of partners for linkages between the mobile channels and back office systems, combined with training, will help ensure integration of new products and delivery channels. Defining the business model for each product is a key deliverable of the pilot phase, and the process of product development to business model will be documented for sharing with appropriate audiences.

At the provider level, it is anticipated that LEAP will produce the following outputs:

- At least 4 new products are developed and tested by at least 4 partner financial service providers
- ❖ At least 2 innovative dissemination tools developed to deliver products
- ❖ At least 80% of partner MFI staff report better understanding of the process for developing bespoke products for rural markets

2.7. WORK PLAN AND TIMELINE

TANGO, an international firm specializing in evaluations, will develop an impact survey and undertake a baseline survey during the first three months. Additionally, consultants will perform a detailed demand and feasibility analysis during the first two months to determine the profile of potential rural clients, especially agro-pastoralists, and to specify the needs and expectations for financial products and services. Specific target villages will be selected on the basis of an existing mobile network, existing savings groups, and insurability.

Partners were selected on the basis of their rural presence and their operational capacities to educate rural clients and deliver appropriate financial products and services to them. Mercy Corps will identify constraints and gaps in terms of products, technical capacity, infrastructure, technology, and marketing capacity within the MFIs and will develop a work-plan for the integration of MFI software with local Mobile Money Operator systems. It is expected that the time from finalization of partnership agreements through the design of the LEAP technology integration, product development, selection of distribution models and pre-piloting exercise will take approximately 5 months. Financial regulators will be engaged during the pilot phase to ensure regulatory oversight and consumer protection.

Product design will commence with financial literacy and entrepreneurship education by PlaNet Finance. Village agents will be trained on the financial literacy and entrepreneurship curriculum, and vocal SMS recordings in the form of interactive sketches will be developed within the first four months. The detailed delivery models for financial products and services (including rates, terms, conditions and financial models) will be developed and piloted by partner MFIs with technical assistance from Mercy Corps. Insurance products will be developed by PlaNet Guarantee in consultation with PlaNet Finance and EARS, a high-tech remote sensing company specialized in remote and near sensing techniques to construct the crop-specific risk index. Specific product features and wording will be finalized based on the ability and willingness of the potential agropastoralists to pay and the risk appetite of the insurer for the insurance products developed and tested. For insurance products, several elements will need to be identified: the claim trigger point or risk stage at which insurance coverage triggers indemnity payment, the risk stage where insurance cover ends, the indemnity payment rate for risks within agreed bands, and risk pricing. Channels for collecting deposits, repayments, premiums and administering claim payouts will determine the efficiency and reliability of each of the financial products and services. This stage will determine the distribution models most appropriate for the selected districts and models that could reach more rural clients at a lower distribution cost. When possible, bundling of services will be considered.

Pre-piloting will be undertaken to carry out any necessary adjustments before the first set of products, services or contracts are sold to clients. After each cropping season, client feedback will be collected and used to improve product features, distribution processes, and claim settlement. To reach more rural male and female clients, marketing materials will be developed, including radio messages and media campaigns. The pilot will inform finalization of product parameters and pricing, policy wording for each offering as well as the distribution models and arrangements. Sales of each of the products will continue from month six on a rolling basis with each partner.

To ensure services continue during the expansion phase, Mercy Corps will work closely with MFIs to ensure

- Technical capacity building to enable the design of new, appropriate products and services iterating on first round of products
- Village Agents grouped under a partner to be managed forward
- ❖ All products and service have proven business models to ensure adoption and replication.

2.8. QUESTIONS AND METHODOLOGIES

LEAP offers an exciting opportunity to generate learning about the linkages between financial inclusion, household and community gender dynamics, market systems, and resilience to climate shocks. Resilience building should be ambitious in aiming to enhance poor men and women's capacity to thrive despite shocks and stresses rather than just cope or bounce back to the initial status quo. Adopting an approach that looks at resilience as a process by which individuals and systems are able to bounce back better, to challenge the

structural causes of vulnerability and to thrive despite uncertainty and disturbances is the underpinning assumption that drives our research.

As part of LEAP's learning agenda, Mercy Corps will carry out three learning streams over the course of the program:

1) Testing the program's theory of change and tracking assumptions

The first stream will test the program's theory of change through the baseline study as well as a final evaluation focused on capturing program-level impact and outcome indicators, linking them to resilience capacities, and measuring changes within the context of shocks and stresses vis-à-vis specific vulnerabilities of agro-pastoralists. Mercy Corps will partner with TANGO (as an external evaluator to the program) to streamline research into baseline and endline data collection, and will discuss opportunities of recurrent outcome monitoring following shock-related trigger events.

Examples of questions that will guide the research include:

- In what ways does financial inclusion contribute (or not) to household resilience in the face of climatic shocks? How does financial education contribute financial capability positively impacting the ability to manage climatic shocks and stresses?
- Is financial inclusion alone sufficient to make significant gains in resilience and/or economic development?
- Which types and combinations of financial services make the biggest difference in securing financial capital and in building assets?
- To what degree does gender-differentiated access to and control over financial capital and decisionmaking around household finances contribute to or detract from resilient capacities?
- Which changes show potential of persisting beyond the life of the project? How can these sustainable changes be guaranteed?
- What (positive or negative) unexpected outcomes are occurring? How can the program capitalize or control for these?

2) Identifying potential covariates for resilient outcomes and innovating program design

The second stream will conduct research at opportune moments throughout the program (around the midterm evaluation or following specific shocks). Findings will be used to expound upon gender specific research questions (such as the one listed above) to integrate into the LEAPs monitoring and evaluation framework, which will align with and feed into Mercy Corps' growing regional evidence base around gender and resilience. Case studies will be built around specific shocks such as drought or floods in order to capture resilient capacities or financial products and services that were particularly effective in responding to these events. Different components of Mercy Corps' Strategic Resilience Assessment (STRESS) process, as well as other qualitative methodologies such as Climate Vulnerability and Capacity Assessments (CVCAs), Participatory Rural Appraisal (PRA), and Most Significant Change (MSC) methodologies will be integrated to better understand coping strategies, changes in intensity of shocks, evolving community dynamics that impact resilient capacities, and highly vulnerable livelihoods. TANGO will serve as the learning partner for this stream, and will provide support in designing tools and providing technical review of these products.

3) Operational research to improve program quality and share lessons learned

Finally, as LEAP will be engaging strongly with the private sector for the delivery of products and services, LEAP plans to conduct operational research to better understand and document bottlenecks and breakthroughs in client centric product design, implementation, iteration, challenges and successes. This research will be conducted using adapted monitoring tools as well as periodic participatory after-action reviews. Mercy Corps sees LEAP as an opportunity to improve processes and integrate new technologies that support the private sector to create new financial products tailored to agro-pastoralists. In addition, Mercy Corps' past experience

in partnering with the private sector has established compelling case studies that have served as guidelines or best practices for other agencies seeking partnership in emergency or development settings around the world, and Mercy Corps seeks to build on this body of knowledge within the Sahel context.

2.9. Measuring Progress Towards Outcomes

In order to measure progress towards outcomes, Mercy Corps will conduct a baseline at project launch, a midterm at the end of the 2-year catalyzing cycle, and an end line at the end of the 5-year project cycle. Data collection will be conducted by TANGO, who will work with Mercy Corps to guide data collection, formulate key questions to understand the impact of project activities on resilience and capacities, and will write baseline and evaluation reports. These measures will be combined with Mercy Corps' monitoring data, which will track outputs in partnership with private sector partners (for example, to monitor uptake of products) in order to evaluate how deliverables are producing outcomes envisaged by the project. All project outputs and outcomes will be tracked within the project M&E database.

As the initial two-year project will focus on piloting products and services and proving viability, and the second 3-year phase will focus on product innovation and scaling, many of the impacts will not be fully felt or measured until the end of the 5-year project. LEAP will integrate regular learning checkpoints in order to evaluate the effectiveness of products, solicit customer feedback, and understand barriers to adoption, which will then feed into product adaptation and re-design. A mid-term evaluation will be conducted at the end of the 2-year project period with direct beneficiaries to better understand the process around product uptake and perceived impact due to product use. A final evaluation will then be conducted at the end of the 5-year project to measure broader ecosystem change and impact on strengthening resilience to shocks and stresses, and to better answer the research questions outlined above.

2.9.1. INDICATORS

Indicators have been set in the logical framework, and outcome-level indicators include the following:

| Level | Description | Indicator | Data Sources | Assumption |
|---------|---|---|--|--|
| Goal | Agro-pastoralists in Mali and Niger have improved food and income security. | - % of households living below the \$1.50/Day/2005 PPP - % of household with moderate or severe hunger according to the HHS | Baseline, mid-line, endline survey at the population level | |
| Purpose | Agro-pastoralists have enhanced resilience to climatic shocks. | Compare purpose indicators with the following: - Frequency, duration and intensity of shocks and stressors, disaggregated by type - Months of Adequate Household Food Provisioning | Continuous monitoring with trigger indicators | Minimal conflicts thus low migration in region so that results can be tracked during two year period. Other local, government or development-actor lead initiatives for livelihood development are undertaken or maintained. |
| Purpose | 2. Improved ecosystem to make financial products and services more accessible, affordable and appropriate | - % of the population that has conducted one transaction in the last 90 days - % of population with a bank account - # of mobile money agents - # of new financial service providers entering the market | Baseline, mid-line, endline survey at the population level | Mobile network remains stable and agent base grows. |
| Outcome | 1.1. Agro-pastoralists equitably improve management of household finances. | -% of male and female clients reporting change in financial behaviors attributable to financial education | Baseline, mid-line, endline survey at the population level | Looting and thievery in target areas remains at a minimum. |
| Outcome | 1.2. Agro-pastoralists invest in profitable livelihood strategies. | % of households with more than 1 economic activity % of households with both an agro-pastoral and non-agro-pastoral economic activity | Baseline, mid-line, endline survey at | Confidence of agro-pastoralists to invest in higher return activities |
| Outcome | 1.3. Agro-pastoralists protect or replace investments | - Average productive assets index score | Baseline, mid-line, endline survey at the population level | Uptake in insurance products. |
| Outcome | 1.4. Agro-pastoralists reduce negative coping strategies. | - Average Coping Strategies Index score | Baseline, mid-line, endline survey at the population level | Reduction of negative coping strategies keeps productive assets stable, and agro-pastoralists are capable of reinvesting and augmenting revenus with financial products. |
| Outcome | 2.1. Private sector leads creating financial products and services for agropastoralists | - # of new products and services developed and offered to agro-pastoralists | Baseline, mid-line, endline survey at the population level | Viable business models are proven |
| Output | 1.1.1 Agro-pastoralist women and men have improved financial and entrepreneurial education | - # of program participants with a financial education/entrepreneurship test score of 70% or higher | Continuous post- training quizzes, numerator and denominator | Entrepreneurship and financial education is tailored to agro-pastoralists needs and is deemed relevant, inequalities between men and women are not aggravated. |
| Output | 1.2.1 Agro-pastoralists enhance savings, remittances and credit for investments. | - # of male or female individuals purchasing or engaging with new savings, remittance and credit products/services promoted by the program (disaggregated by product or service) | | Products are accessible, affordable and appropriate, livelihood and business strategies are developed to a certain level where they can benefit from monetary investment. |
| Output | 1.3.1 Agro-pastoralists can insure harvest and livestock to mitigate risks. | - # of male or female individuals purchasing harvest or livestock insurance promoted by the program | Financial product customer databases (raw counts and age/sex disaggregation) | Products are accessible, affordable and appropriate; index-based insurance are set at a level that is triggered by agropastoralist losses. |
| Output | 1.4.1 Agro-pastoralists can choose between multiple formal channels for cash in times of need. | - # of male or female village agents selling or sharing information on new products/services promoted by the program | Quarterly village agents updates | There is sufficient usage of services to ensure agent business is viable, agropastoralists make informed choices based on products and serves that are tailor-fitted to their actual needs. |
| Output | 2.1.1 Partnerships with private sector result in tailored financial products and services. | - # of financial products and services developed with LEAP input | Canvases, post- product development | Faster uptake proves value of investing in client centric approach |

2.9.2. BASELINES

Population-based data for all project areas has not yet been collected by Mercy Corps and will be necessary to establish baselines for all indicators in the log frame. Other recent data collection efforts demonstrate that populations similar to those being served by this program have between 7.4 and 8.1 months of adequate household food provisioning per year, 37% report having more than one economic activity, the level of banked population remains under 1% and there are no village agents in targeted zones that are selling products like those that will be developed by the program. Other USAID-funded projects have already collected baseline data for project areas specifically in Niger, and if possible LEAP will leverage this data to cut costs and enhance value for money. Otherwise, baseline data will be collected within the first 3 months of program start-up by TANGO as the evaluation partner, who will ensure evaluation data collection throughout the life of the program. This data will be submitted as an initial draft baseline report before the end of the first semester.

2.9.3 Provide a Monitoring and Evaluation Plan (M&E)

See Annex D for the Monitoring and Evaluation Plan.

2.9.4 Provide a Value for Money Plan

LEAP has been designed to deliver maximum outcomes to strengthen the resilience of target communities, while ensuring that project funds are invested in a way that will deliver maximum value for money for both project donors and the populations we work with. Several key factors underpin our value for money plan, and will be tracked over the course of the program.

| Sector | Key Cost Drivers | Actions to Manage Them | Indicator |
|--|--|--|--|
| Economy: Maximizing cost-share | Operational and overhead expenses for Mercy Corps | Ensure complementarity with existing programs, cost share key operational staff positions and overheads | % cost share with other programs |
| Economy: Ensuring efficient procurement | Procurement of project goods and services | Ensure that procurement maximizes quality and minimizes cost to deliver maximum value for money | % of tender processes that are accomplished at or below budget |
| Economy: Minimizing staffing costs for Mercy Corps and partners | ing costs for Mercy s and partners Technology investments, | The facilitation approach adopted by the project requires a minimum number of staff, as field-level implementation is led by private sector partners, minimizing staffing costs | Adherence to budgeted salary costs |
| Efficiency: Ensuring strategic investments in subsidies to private sector | Technology investments, marketing and staffing costs | Each targeted subsidy will be carefully evaluated with respect to its utility, necessity and ability to catalyze larger change | Return on investment |
| Efficiency: Leveraging matching investment from Private Sector Partners | Leveraging partner investment in technology, staffing, product development and marketing costs | When possible, cost share provisions will be included in partnership agreements; project funds will allow investments in product testing or marketing; investments in transformative | Matching funding leveraged over the life of the program |

| | | technology; or investments in software development only as necessary to prove product viability. Partners will invest in scaling independently. | |
|--|--|---|--|
| Efficiency: Multiplier effects of targeted investments | Software and technology costs | When possible, investments will be made with potential for scaling, replicability and multiplier effects in mind | Indirect beneficiaries of targeted investments |
| Effectiveness: Regular mini-evaluations to enable iterative product design | Technology development, software costs, staffing | Rapid prototyping and testing to allow pivoting and iteration prior to substantial investment | Cost of developing individual prototypes |
| Effectiveness: Ensuring the development of piloted and tested business models to prove viability | Technology development, software costs, staffing, marketing, operating costs | Developing business models to prove financial viability will demonstrate product potential to partners to encourage investment in scaling | Return on Investment; Profit margins |
| Effectiveness: Quality program deliver to attain objectives | Operational, program and overhead costs | Regular evaluations to ensure that prototypes are contributing to desired resilience outcomes; pivoting product design to reach desired impact | Number of beneficiaries with enhanced performance on key financial resilience indicators per \$ invested: - # of active mobile accounts opened, - Increase in savings, - Loan value - Value of crops/livestock insured |

SECTION 3: ACHIEVING THE RESILIENCE CHALLENGE

3.1. GENDER AND EQUITY

Mercy Corps believes that it is impossible to build resilience in households and communities without also addressing systemic gender inequity. LEAP's design supports and integrates findings from Mercy Corps' wider experience and research on gender and resilience in the Sahel, which found gender-differentiated coping and adaptation mechanisms, as well as gender-differentiated impacts of common coping mechanisms when households experience a shock or stress. For example, when cash is urgently needed, small livestock is usually sold first, typically one of the few resources owned by women and youth and representing an important element of household savings. LEAP field research also showed that financial coping mechanisms in Tillabéry and Gao regions in Niger and Mali are gender-differentiated. For example,

"Unequal access to and control over productive and financial resources were also found to limit the ability of women and youth to adapt to shocks and stresses. As a result of limited access to credit and control over productive resources, women are often less able to diversify or utilize improved varieties of crops and small livestock that are better able to withstand drought or pests."

Rethinking Resilience in the Sahel, Mercy Corps 2014

results from research in Tillabéry revealed increasing cases of men migrating outside of the country to find work in coastal cities, exposing them to new risks including high-interest loans to finance their travel and weakened social safety nets⁹.

Power structures – especially gender norms -- also influence access to and control over the financial capital necessary for adaptation. Women in Niger, for example, mentioned that their primary source of revenue to cover expenses comes from their spouse, and 97% of the men and women surveyed mentioned that the husband decides how to spend for both daily and large purchases. In Niger, researchers from Tufts University found evidence from a social cash transfer program that demonstrated that the greater privacy and control of mobile transfers compared to manual cash transfers shifts intra-household decision-making in favor of women. Financial services delivered over the phone have the potential to address women's preferences in new and different ways compared to traditional financial service delivery mechanisms. The services and products that LEAP will develop, test and scale during the program will take into account structural gender inequalities in Niger and Mali to enhance women's access and control over financial decisions and assets. We will engage important gatekeepers throughout the process, while also ensuring that products and services take into account the specific needs of men and boys as well.

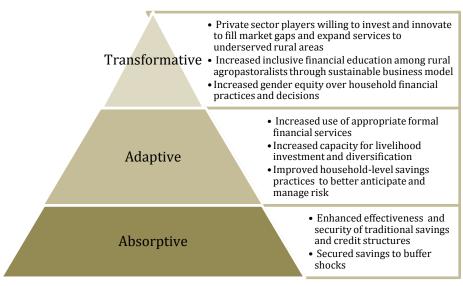
Given the importance of technology to scale financial inclusion solutions, LEAP will conscientiously consider gender differences in mobile phone access and marketing approaches to ensure that activities are designed to close gender gaps that undermine access to and exploitation of technology, especially among women. Primary research conducted by GSMA in 2015 on mobile phone usage in low- and middle-income countries found a 45% gender gap in mobile phone ownership in Niger. Women, who have less financial independence, cited the cost of the handset and SIM as the most important barrier to cell phone ownership more often than men. Mercy Corps will work carefully with LEAP partners to make sure that unconscious biases do not sustain the gender gap in mobile phone access and utilization, or the design and measurement of new products and services, and to develop strategies to overcome such structural barriers and facilitate greater access to financial services tailored for the specific needs of women.

3.2. RESILIENCE

LEAP's iterative design process followed Mercy Corps' resilience approach by defining research aims in response to the four critical resilience questions—resilience of what, for whom, through what and to what?—in order to identify the underlying causes of vulnerability which undermine household and community resilience in Mali and Niger. Secondary research and field primary research with agro-pastoralist communities and multiple private sector actors, including formal financial institutions and mobile network operators, highlighted a number of systemic socio-economic, ecological and market barriers to securing agro-pastoralists' capital and developing profitable income-generating activities in the face of drought. Human beings have evolved to focus on the short term, to discount the future, to fear loss more than they value gain, to experience paralysis when too many choices are given, to stick with the default option, and to make poor

decisions when under stress. By investing time to understand these behaviors, appropriate solutions will be tested and scaled.

To address these and other systemic barriers. impact pathway intentionally weaves together short-term absorptive, medium-term long-term adaptive and transformative capacities to build the resilience of agropastoral households. **LEAP** partners have been selected due to their interest in serving



the rural market and leveraging new tools and channels to expand outreach. Should approaches prove to have the intended impact, mobile network operators have expressed interest in integrating the financial literacy solutions to support uptake of mobile money. LEAP is designed to strengthen the three resilience capacities to reduce vulnerability in the short, medium and long-term.

3.3. SUSTAINABILITY

LEAP seeks to meet local needs and respond to key gaps in financial inclusion with adapted market solutions. Our program design and implementation approach prioritizes learning and iterating based on client demand and adoption, both from the viewpoint of the end user of the financial product or service and from the perspective of the private sector partner, specifically to ensure sustainability and a market-driven business model that can be replicated in other contexts.

Encouraging results from the testing of our prototypes during the solution development phase support the market potential for adapted, affordable, accessible financial products and services which build upon traditional mechanisms and leverage technology to reach unbanked clients. For example, women's village savings and loan groups in Mali who learned about the mobile-based savings and credit product were quick to grasp its utility to secure cash collected from weekly membership dues, affirming interest in the product even if there were built-in fees. Micro-insurance products for agriculture and livestock received extremely high interest in both Mali and Niger from nearly all participants in focus group discussions if the premiums can be made affordable.

LEAP's added value is to play the role of facilitator to ensure the development of pro-poor, inclusive products and services specifically targeting the needs of rural clients, implicating private sector partners in evidence-based learning to test what works, and to refine and scale product offering. Sustained adoption hinges upon a robust financial education and marketing period, flexibility for the trial and error of new products designed with financial viability and sustainability in mind.

The key to LEAP's sustainable business model is to focus on facilitating both supply and demand of products and services adapted to the specific needs of agro-pastoralists. Not only will the specific products developed under LEAP be designed and tested with sustainability in mind to ensure financial viability, technical viability and a growing client-base, but by ensuring 1) rigorously testing products to demonstrate impact and commercial viability; 2) training partner staff on human centered design and product innovation principles; 3) familiarizing partner FSPs with rural market potential and the needs of rural clients; and 4) supporting growth of the financial services ecosystem, including development of agent networks and driving use of mobile service offering. The backbone of the sustainability strategy is to ensure that private sector partners will have the skills, incentives and interest to continue to innovate and deliver new product offerings adapted to the needs of rural clients after the end of the program.

Taking advantage of economies of scale, it is anticipated that partners will scale viable products independently after the catalyzation phase based on demonstrated market opportunities. Finally, it is anticipated that changes in customer behavior, thanks to both financial education and the experience of using tailored products, will continue to drive behavior change after the life of the program, influencing consumer behaviors for those directly and indirectly touched by the program. As products gain popularity, it is anticipated that even more risk averse or resistant customers will move toward adoption, driving financial inclusion and use of products. As a result, it is anticipated that LEAP will realize sustainable changes in the way that rural households manage finances, make financial decisions and mitigate risk, leading to sustainable improvements in household resilience in the long-term.

4.1. RISK MATRIX

| Risk Description | Probability | Impact | Risk Mitigation |
|---|--------------------------|--------|---|
| Conflict risk | High | High | Geographical diversification will allows us to focus activities on more stable areas in case of severe conflict |
| Large presence of humanitarian actors/emergency distributions can distort financial practices | High | Medium | Products can be developed to leverage cash transfers together with humanitarian organizations Financial education will include advice for managing humanitarian assistance (i.e. savings) Engagement with humanitarian actors to transmit relevant messages for population (i.e. financial education) |
| Project planning and timelines not respected | Medium | Medium | Delays might occur in procuring or scheduling the technical integration of IT systems, causing delays in product launch. A thorough IT diagnostic at program launch should speed up the process. Integration of indemnity clauses within contracts. |
| Business models are not shown to be profitable | Medium | High | Understand costs on both client and business side, if necessary cross-subsidize with other market segments |
| Clients do not trust mobile money and/or MFIs | Medium | High | Conduct transactions with Village Agents immediately after training Test products with MFI staff first to ensure their confidence Product support desk for staff and customers Continual reinforcement of client education |
| Systems and technology have frequent breakdowns | Medium | Medium | Automate processes on backend Clients receive SMS when transaction is completed Educate clients on recourse |
| End users cannot access cash or service | annot access Medium High | | Involve MFIs to work with agents in their catchment area on liquidity management Credit lines between MFI and agents Clearly define roles and responsibilities of providers and educate clients on recourse |
| Inadequate safeguards for client protection and theft of user funds | Low | Medium | Train clients on PIN number security Avoid manual transactions Adequate processes at MFIs to ensure controls in place |
| Privacy concerns on use of client data | Low | Medium | Allow for opting out Client education and user interface clear on opt out solution |
| Political risk | Medium | Medium | Share project plans with the government and keep them in the loop |

4.2 SOCIAL AND ENVIRONMENTAL IMPACT ASSESSMENT

Environmental Impact

The majority of the agro-pastoralists in the Sahel region are dependent on the natural ecosystem (land and water systems) for their livelihoods. Ecosystem degradation will increase vulnerability and risk, increasing the mortality rate of livestock, reducing agricultural yields and leaving people exposed to reliance on humanitarian

support. In the push to secure quick returns on loans, households may undertake income-generating activities that further deplete and degrade the natural asset base. LEAP will seek to mitigate this negative effect by integrating messaging about the importance of ecosystem protection and natural resource management within project outreach activities, and will monitor for these harmful impacts over the lifetime of the project to identify unintended outcomes early in order to mitigate harmful impacts.

Our experience in this region through USAID and other donor programs will ensure full compliance with 22 CFR 216.6. Immediately upon award, we will hire a consultant to conduct an Initial Environmental Examination (IEE). While we do not expect any threshold issues from the light-touch LEAP interventions, should the IEE determine any areas of risk, the team will work with GRP and USAID to develop necessary mitigation strategies and request environmental approval prior to undertaking any highlighted activities.

Social Impact

As in any transaction, information is power. Users of financial services, especially new customers, lack information about the financial system and financial transactions. Increasingly, on the other hand, the financial providers serving these customers try to access a great deal of information about the customer and the market including credit histories, market assessments, and analysis to inform their decisions. As financial products increase in their level of sophistication, the information gap expands. LEAP will guide financial service providers to educate consumers and small businesses about their options to increase confidence, competence, and adoption. We will prevent harm by working with partners to ensure they do not use misleading marketing approaches, by validating the roles of Village agents, and by using financial education to ensure individuals understand their rights and responsibilities in the context of financial inclusion.

Mercy Corps recognizes that introducing change into any social system has the potential for unintended consequences that can lead to grievance, conflict and violence. LEAP will therefore employ a Do No Harm analysis prior to each intervention, and regularly monitor the social impacts of our activities through follow up assessments and through project M&E. Please see section 3.1 for a description of potential impacts on gender dynamics, which will be carefully monitored and mitigated throughout the program.

5.1. BUDGET

SECTION 6: TEAM COMPOSITION

6.1 LIST OF ANY CHANGES TO THE TEAM OR LIST OF FULL TEAM

INRAN (Institut National de Recherche Agronomique au Niger) and UAM (Abdou Moumoundi University), our research partners for the 1st and 2nd phases of LEAP specializing in geography, agriculture and sociology, have left the LEAP project team. As the project strategy evolved to focus more directly on financial services, through strong collaboration with the private sector, it was recognized that these team members do not have the required expertise to support the research needs of the project going forward. LEAP will continue to engage these partners during the implementation phase on a contractual basis, making use of their field knowledge to conduct market research and to better understand the structure of the agricultural sector.

Mercy Corps proposes to work with a new research partner, TANGO International, to develop LEAP's resilience measurement framework and to conduct the baseline assessment at project launch, as well as an impact evaluation at the mid-term and end of the 2-year project period. TANGO International is a global leader in food security, livelihoods and resilience programming, providing technical assistance in assessment, design, monitoring and evaluation for development and recovery programs. TANGO specializes in providing expertise that links recognized research and best practice, and is taking a leadership role in understanding resilience, working with USAID, FAO, WFP, DFID, IFPRI, World Bank and NGOs to develop measurement frameworks and tools to understand and measure resilience. TANGO will also be working with Mercy Corps' East Africa GRP program, TRADER, which will allow a maximum of learning and sharing of lessons between the two regions.

LEAP also proposes to work with several private sector partners from the financial sector: LemonWay (Mobile Money operator in Mali), Soro Yiriwaso (MFI in Mali) and PlaNet Guarantee (micro insurance broker). Each partner has been actively engaged during the solution development phase in prototype design and development to ensure their interest and alignment with the objectives of LEAP.

6.2 SUMMARY OF TEAM'S STRENGTHS AND RELEVANT EXPERIENCE

Mercy Corps is a leader in putting resilience theory into practice with over 25 active programs that address resilience and break cycles of crisis. Additionally, Mercy Corps is a proven leader in West Africa in sharing information and forging collaborative partnerships with government, NGOs and the private sector, with 10 years of operation in Mali and Niger. Mercy Corps contributes specific expertise in applying a gender equity lens to LEAP, building on an emerging evidence base indicating that increasing gender equality in households and communities leads to increased resilience to shocks and stresses. Mercy Corps' facilitative and inclusive approach will ensure maximum coordination and impact.

Partner MFIs, Soro Yiriwaso in Mali and ASUSU SA in Niger, have a deep focus on the financing for the agricultural sector, especially for women. Both already offer a large range of savings and credit products and have an interest to further develop their product offering and to develop mobile payment technologies (which they currently are not using). Both use the same Management Information System (Perfect) for tracking client data and have already partnered with at least one MNO.

The main roles and responsibilities of the partner MFI are:

- To develop new client centric products and processes
- To train staff to understand the new products and processes
- To provide saving and credit products to agro-pastoralists via mobile

- To share results and experiences of the model with Mercy Corps
- To scale up the model (marketing, agent network)

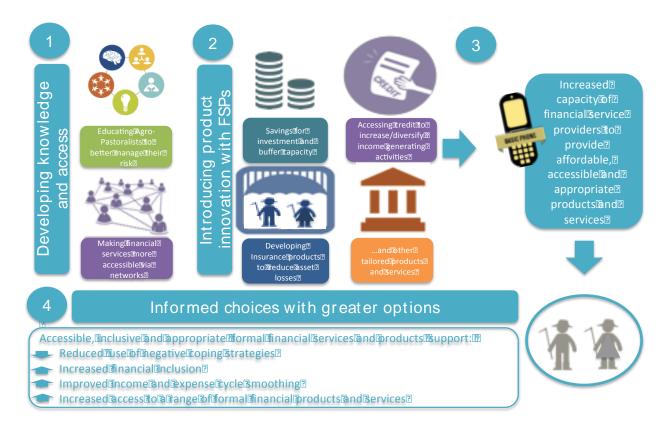
LEAP's will also partner with PlaNet Finance, a French NGO founded in 1998 with the mission to alleviate poverty by contributing to the development of the microfinance sector. PlaNet Finance provides technical assistance and consulting services to microfinance stakeholders, including financial institutions, governments and mobile phone operators that wish to develop financial inclusion services. Through research and training, PlaNet Finance contributes to the professionalization of the sector and to the dissemination of best practices. In West Africa, they support the promotion of female entrepreneurship, support access to financial services for poor women, and conduct training and awareness-raising to support micro-entrepreurship.

PlaNet Guarantee will leverage PlaNet Finance's network of established relationships with insurance companies to quickly engage partners and expand uptake of harvest and cattle insurance. PlaNet Guarantee designs specifically targeted micro-insurance products and solutions for people in the informal sector who are largely excluded from traditional insurance offerings. Founded in 2007 and taken over by PLEIADE Tips from 1 November 2013, PlaNet Guarantee is assisting in the promotion and development of micro-insurance as a specialized broker. Operating as a "Social Business," PlaNet Guarantee designs products tailored to vulnerable populations such as Agricultural, Health and Life Insurance products. Since 2011, the Crop Insurance project in Sahel (ARS) has been operating in Mali, Senegal and Burkina Faso to reduce the income fluctuation of West African farmers and fight against the deterioration of their living conditions.

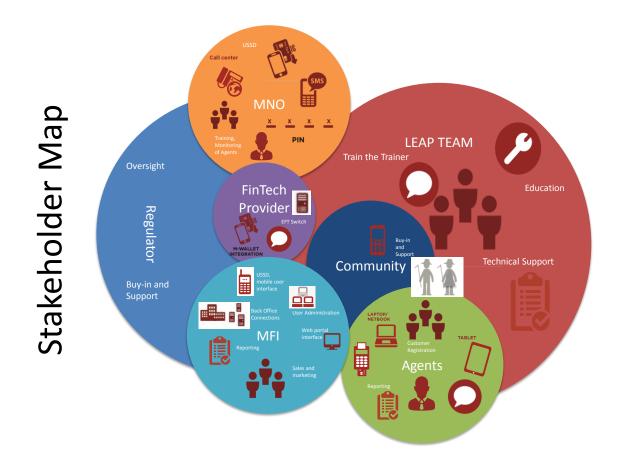
In addition, LEAP has integrated a new member, LemonWay, which specializes in the launch of innovative mobile solutions in the areas of banking and finance. Created in 2007 in France, Lemonway now covers 28 European countries, and started its activities in Mali in October 2014. Lemon Way Mali is a start-up which is looking to leverage its experience in adapted remittance products to further expand financial products and services. It offers mobile phone owners the possibility to make payments and international transfers with their mobile phone, regardless of the telephone operator they use. Their pricing is more competitive that the already established MNOs.

ANNEX A: IMPACT PATHWAY

Agro-pastoralist households better manage climate shocks



ANNEX B: MAP OF STAKEHOLDERS



ANNEX C: PROTOYPES



Prototype: Group Savings and Credit via mobile

Overview

Estimated development time : 6 months

Geographic Focus: Gao et Tilabéri

Financial need met: secured savings, access to credit **Partners required:** MFI, Mobile money operator

Technology required: SIM, mobile money account, interface

between mobile wallet and MFI systems

Savings and credit products for VSLAs where group is managed via a mobile application to increase transparency for group, savings and credit pass via the group mobile money account linked to the MFI. Despite being in a group, individual members are tracked to develop credit history to avoid over-indebtedness. Product is co-developed with MFI and VSLAs to ensure designed for needs and affordability. Village Agent (VA) makes access to account easily accessible, oversees groups, monitors credit.

How it Works

- Village Agent is trained to ulilize a mobile application to manage the groups of 15-20 people that s/he creates and offers financial literacy and entrepreneurship training.
- The Village Agent signs a contract with the VSLA as well as the mobile money operator as distributor and earns an income for service provided.
- 3. The VSLA group opens a mobile money account assisted by the Village Agent.
- 4. Members of the group meet weekly to deposit savings via the Village Agent.
- Le Solidarity Fund is placed in a savings account with the MFI (financial guarantee of 10% of credit offered)
- 6. MFI reviews credit history of group for credit decisions
- Credit offered at end of group cycle (15-18% interest with a grace period) based on social collateral.
- Village Agent collects signatures for credit contracts and checks the use of credit (income generating activities)
- Group members pay their credit via the Village Agent and continue to deposit into both the savings and solidarity fund.

Value Proposition

Client Need Addressed

- Safer savings
- Access to affordable credit matching their ability to pay
- Group oversight (Technical support)

· Lack of awareness of products and

• Transparency amongst group members and with the VA

Barriers

- services
 Illiteracy
- Mistrust in financial service providers
- Products not tailored for market needs

Proposed Solutions

- Village Agent trained to communicate value of products honoring consumer protection rules
- Mobile application is vocal so group member can hear transactions and has own PIN for accessing account
- Products are co-developed with a clientcentric approach

4



Prototype: Commitment Savings Account

Overview

Estimated development time: 3 months Geographic Focus: Tilabéri et Gao Financial need met: investment

Partners required: Financial service provider

Technology required: mobile money account, interface between

MNO and MFI

Given the myriad challenges to saving after the harvest, financial services tailored to the needs of farmers may overcome some of the obstacles to savings. Commitment savings accounts address selfcontrol problems by forcing customers to save for a certain period of time. Without such a restriction people are more likely to spend their savings, as they are generally impatient with money—many value it in the present much more than in the future. Commitment accounts play to this idea by letting people regulate themselves.

How it Works

- 1. Group sensitized to commitment savings account
- 2. Group receives savings module of literacy training to understand benefits of savings accompanied by entrepreneurship training
- Individuals determine a project for saving up
- Village Agent helps those who are interested in an commitment savings account open one immediately linked to the MFI
- Individual determines date or amount to commit savings and payment calendar is established
- Direct deposit available from individual, family, friends both nationally and internationally via linkage
- Individual receives SMS reminders for payments with balance due and deposits by others into account
- For individuals who reach their target dates, a small interest is earned on the savings amount

Value Proposition

Client Need Addressed

Need for funds for income generating

Barriers

- · Lack of self-control
- Illiteracy
- · Lack of access to formal savings
- Unstable incomes
- Peer pressure to share with others

Proposed Solutions

- · Flexibility whereby client chooses date or amout
- · Direct deposit via mobile transfers
- Commitment to saving future money not currently available, ie remittances



Prototype: 'Warrantage Cyclique', a Year-round Credit **Inventory System**

Overview

Estimated development time: 3 months Geographic Focus: Tilabéri, Monti

Financial need met: credit

Partners required: Financial service provider

Technology required: basic phone, mobile money account

This innovative model aims to capitalize on both rain-fed and dryseason agricultural production through a cyclical credit cycle (twice a year), while facilitating access to improved input suppliers and technical services. The warrantage model has been proven successful in raising farmer's income and opening the door to other types of credit products; the aim now is to develop a business model in which the warrantage system could be offered as a commercially viable service while also being financially beneficial to the farmers.

How it Works

- 1. Organize men and women farmers in an association around an existing warehouse and lock in a partnering MFI
- Consolidate the non-perishable harvest into warehouses and store to international standards (depending on season, would be cereals or processed/dried/non-perishable vegetables)
- Members participating in warrantage store their bags for a 4 to 6 month period and MFI and group both hold key to storage warehouse
- Group loan is made available from MFI with the bags serving as collateral Group members can borrow up to 80 percent of the value of the stored bags (a safety net in case of depreciation of the value of the stored bags)
- To prevent default and promote investment in income generating activities, farmers able to decide to put a portion of credit towards quality inputs (rain-fed seeds, vegetable seeds), delivered directly from wholesale suppliers at low cost in contract with the MFI. Access to technical services is bundled
- 7. Income generating activities pay the loan prior to the sale of the goods and loan repayments made via mobile transfer. In case of credit default, bags can be sold after storage period ends at off-season market prices (higher value).
- Process is repeated for following season's production to ensure year round access to credit (two cycles per year envisioned).

Value Proposition

Client Need Addressed

- Avoid selling when prices are at their lowest
- Access to affordable credit matching their input needs and ability to pay year round • Lack of awareness of products and services

Barriers

Fear in taking credit

Illiteracy

- Managing warehouse stock to minimal standards
- Existence of a warehouse meeting minimal
- Introduce a cyclical credit linked to inputs for rain-fed crops and vegetable production
- · Year-round credit and reimbursement scheme capitalizes on off-season market prices, building client loyalty
- Link to input suppliers which could eventually include built-in insurance
- Links to technical services, like processing vegetables for value-added sales during off-

Proposed Solutions



Prototype: Crop microinsurance

Overview

Estimated development time: 6 months

Geographic Focus: Regions of Gao and Mopti

ancial need met: Ensuring minimum and/or an average income

Partners required: MFI, producer cooperatives, insurance company, reinsurance company

Technology required: Basic phone, mobile money account, satellite

data

Crops, particularly millet and sorghum are the main source of income and of nutrition for small farmers in the region. However, crops are very sensitive to climatic shocks and every few years a farmer will loose a portion or the entire harvest. Crop microinsurance is specifically designed for small farmers needs in terms of premium, fast refund, low administrative requirements and proximity. Products are designed to meet farmers' needs individually while using a low

How it Works

- 1. The insurance company designs a microinsurance product based on regional/local data. The crop insurance is an indexbased model using satellite and weather data as trigger of the insurance.
- For millet and sorghum, precipitation levels are the proxy indicator. The policy can include refund for seeds and fertilizer as well.
- The insurer will develop a distribution network of MFIs, producers cooperatives, inputs providers or a telecom operator. These partners will distribute the product for a commission and the risk will be born by the insurer.
- The payments and refunds can be carried out by the partners directly depending on the selected model. Farmers will be able to contract crop insurance policy from their village via mobile or from the closest partners

Value Proposition

Client Need Addressed

- Ensure minimum income and investments refund
- A product dedicated to small farmers needs
- Service is easily accessible
- **Barriers**
- · Lack of awareness of insurance
- · Mistrust in financial service providers
- · Difficulty to understand the index-based model for clients
- Capacity to develop a good partners'network

Proposed Solutions

- Partners/distributors trained to communicate value of products honoring consumer protection rules
- Products are co-developed following a clientcentric approach



Prototype: Cattle microinsurance

Overview

Estimated development time: 6 months

Geographic Focus: Tilabéri

Financial need met: Conservation of assets

Partners required: Aggregators (MFI, producer cooperatives), insurance company, reinsurance company

Technology required: Satellite fodder data

Cattle is a key savings mechanism and income generation activity in the region. Climate change shocks and armed conflicts have increased the risk of cattle mortality thereby threatening farmers' financial resilience. A cattle insurance specifically designed for low-income farmers has proven to be an efficient method to mitigate such risks. The proposed product is a microinsurance policy offered by an insurance company and distributed through value chain actors for increased outreach and low overhead costs.

How it Works

- The insurance partner designs a microinsurance product based on regional/local data. The cattle insurance will follow an 'index-based' model.
- In an index-based model, cattle mortality is assessed based on proxy indicators such as fodder quality and availability. The assessment is valid for all farmers in a given area regardless of the mortality of their cattle individually.
- The insurer will develop a distribution network of MFIs, producers cooperatives, and inputs providers. These partners will distribute the product for a commission and the risk will be born by the insurer.
- Farmers will be able to contract a cattle insurance policy from their village via mobile or from the closest partners.
- The partners will forward refund requests to the insurer and may oversee some administrative tasks such as veterinarian

Value Proposition

Client Need Addressed

- Cattle mortality risk mitigation
- A product dedicated to small farmers needs
- · Service is easily accessible
- **Barriers**
- · Lack of awareness of insurance Mistrust in financial service providers
- · Difficulty to understand the index based
- model for clients Capacity to develop a good
- partners'network



- Partners/distributors trained to communicate value of products honoring consumer protection rules
- Products are co-developed following a clientcentric approach

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ANNEX D: M&E PLAN

| | | | | | Baseline | | | | | |
|------------|--|---------------------|--------------|------------------|----------|------------------|------------------|------------------|------------------|------------------|
| | LEAD to disease Disease | | | | value | - | | gets | 47 | |
| | LEAP Indicator Plan | Indicator | Indicator | Level of | | sept 2015- | /16 march-aug | sept 2016- | /17 march-aug | EOA |
| | Indicators | Source | Type | measure | | feb 2016 | 2016 | feb 2017 | 2017 | Target |
| | : Agro-pastoralists in Mali and Niger have improved food and income se % of households living below the \$1.50/Day/2005 PPP | curity. DCED-PPI | Impact | Donulation | | | | | | |
| 1a | | DCED-PFI | Impact | Population | BV | BV | BV | BV - 5% | BV - 5% | BV - 5% |
| 1b | | | | | BV | BV | BV | BV - 5% | BV - 5% | BV - 5% |
| 2 | % of household with moderate or severe hunger according to the HHS | USAID-FANTA | Impact | Population | | | | | | |
| 2a | | | | | BV | BV | BV - 5% | BV - 10% | BV - 10% | BV - 10% |
| 2b | Niger ose 1: Agro-pastoralists have enhanced resilience to climatic shocks. | | | | BV | BV | BV - 5% | BV - 10% | BV - 10% | BV - 10% |
| | Average Months of Adequate Household Food Provisioning | USAID-FANTA | Purpose | Population | | | | | | |
| За | | | | | BV | BV | BV + 1 | BV + 1.5 | BV + 2 | BV + 2 |
| 3b | - Niger | | | | BV | BV | BV + 1 | BV + 1.5 | BV + 2 | BV + 2 |
| 4 | % of male and female clients reporting change in financial behaviors attributable to financial education | Mercy Corps | Outcome | Population | | | | | | |
| 4a | | Wicrey corps | Outcome | Горининон | BV | BV+5% | BV+15% | BV+20% | BV+25% | BV+25% |
| 4b | - Niger | | | | BV | BV+5% | BV+10% | BV+15% | BV+20% | BV+20% |
| 5 | % of households with more than 1 economic activity | Mercy Corps | Outcome | Population | | | | | | |
| 5a | - Mali | | | | BV | BV | BV+10% | BV+15% | BV+20% | BV+20% |
| 5b | - Niger % of households with both an agro-pastoral and non-agro-pastoral | | | | BV | BV | BV+10% | BV+15% | BV+20% | BV+20% |
| 6 | economic activity | Mercy Corps | Outcome | Population | | | | | | |
| 6a | | | | | BV | BV | BV+5% | BV+10% | BV+15% | BV+15% |
| 6b | - Niger | Moroy Corne | Outcome | Donulatio: | BV | BV | BV+5% | BV+10% | BV+15% | BV+15% |
| 7 7a | Average productive assets index score - Mali | Mercy Corps | Outcome | Population | BV | BV | BV+1 | BV + 3 | BV + 5 | BV + 5 |
| 7b | - Niger | | | | BV | BV | BV+1 | BV + 3 | BV + 5 | BV + 5 |
| 8 | Average Coping Strategies Index score | TANGO | Outcome | Population | | | | | | |
| 8a | | | | | BV | BV | BV | BV - 5% | BV - 10% | BV - 10% |
| 8b | Niger # of program participants with a financial education/entrepreneurship | | | | BV | BV | BV | BV - 5% | BV - 10% | BV - 10% |
| 9 | test score of 70% or higher (cumulative) | Mercy Corps | Output | Beneficiary | 0 | 5000 | 20000 | 35000 | 50000 | 50000 |
| 9a | | | | | 0 | | | 17500 | | |
| 9b 9c | - female - Mali | | | | 0 | 2500 2500 | | 17500 17500 | | |
| 9d | - Niger | | | | | 2500 | | 17500 | | |
| | # of male or female individuals purchasing or engaging with new | | | | | | | | | |
| | savings, remittance and credit products/services promoted by the | | | | | | | | | |
| 10 10a | program (disaggregated by product or service, cumulative) - male | Mercy Corps | Output | Beneficiary | 0 | | | 10000 5000 | | |
| 10a | - female | | | | 0 | | | 5000 | | |
| 10c | - Mali | | | | 0 | 0 | 2500 | 5000 | 7500 | 7500 |
| 10d | - Niger | | | | 0 | 0 | 2500 | 5000 | 7500 | 7500 |
| 11 | # of male or female individuals purchasing harvest or livestock insurance promoted by the program (cumulative) | Mercy Corps | Output | Beneficiary | 0 | 0 | 2500 | 2500 | 5000 | 5000 |
| 11a | - male | Wicrey corps | Output | Beneficially | 0 | | | 2000 | | |
| 11b | - female | | | | 0 | 0 | 500 | 500 | 1000 | 1000 |
| 11c | | | | | | | 1500 | 1500 | | |
| 11d | Niger # of male or female village agents selling or sharing information on | | | | | | 1000 | 1000 | 2000 | 2000 |
| 12 | new products/services promoted by the program (cumulative) | Mercy Corps | Output | Beneficiary | 0 | 40 | 50 | 60 | 80 | 80 |
| 12a | - male | | | | 0 | | | | | |
| 12b | - female | | | | 0 | | | | | |
| 12c 12d | | | | | | 20 | | | | |
| | lose 2: Improved ecosystem to make financial products and services mo | | fordable and | l appropriate | | 20 | 23 | 30 | 40 | 40 |
| Ċ | % of the population in targeted regions that has conducted one M\$ | | | in targeted | | | | | | |
| | transaction in the last 90 days | Mercy Corps | Purpose | regions | B) / | DV 45-1 | DV 05-1 | D14 DE-4 | DV 05-1 | D14 5 5 5 5 |
| 13a 13b | - male - female | | | | BV | BV+10% BV+10% | BV+20% BV+20% | BV+25% BV+30% | BV+30% BV+40% | BV+30% BV+40% |
| 130 | | | | | BV | BV+10% BV+10% | BV+20% BV+20% | BV+30% BV+25% | BV+40% BV+30% | BV+40% BV+30% |
| 13d | - Niger | | | | BV | BV+10% | BV+20% | BV+25% | BV+30% | BV+30% |
| 14 | % of program participants with an active mobile money account | Mercy Corps | Purpose | Beneficiary | | | | | | |
| 14a | - male | | | | BV | BV+20% | BV+30% | BV+40% | BV+50% | BV+50% |
| 14b 14c | - female - Mali | | | | BV BV | BV+15% BV+20% | BV+25% BV+30% | BV+30% BV+40% | BV+35% BV+50% | BV+35% BV+50% |
| 14c | - Miger | | | | BV | BV+20% BV+15% | BV+30% BV+25% | BV+40% BV+30% | BV+35% | BV+35% |
| | % of population in targeted regions who can cite where to find one | | | Population | | | | | | |
| | new locally-available financial products | Mercy Corps | Outcome | in targeted | BV/ | B//+300/ | B//T3U0/ | B//+400/ | B//+EU0/ | B//:E00/ |
| 15a 15b | - male - female | | | | BV | BV+20% BV+15% | BV+30% BV+20% | BV+40% BV+25% | BV+50% BV+30% | BV+50% BV+30% |
| 15c | | | | | BV | BV+20% | BV+30% | BV+40% | BV+50% | BV+50% |
| 15d | - Niger | | | | BV | BV+20% | BV+30% | BV+40% | BV+50% | BV+50% |
| | # of financial products and services developed with LEAP input | | | | | | | | | |
| 16 | (cumulative) | Mercy Corps | Output | Beneficiary | 0 | 1 | 3 | 5 | 5 | |
| 16a | - Mali | | | | | | | | | |

¹ Mercy Corps, Resilience, adaptation and vulnerability in Mali, May 2014.

² Researchers found that, in Kenya, M-PESA users were able to absorb large negative income shocks (such as severe illness, job loss, or harvest failure) without any reduction in household consumption. In contrast, statistically comparable households who weren't connected to M-PESA experienced, on average, a 6-10 percent reduction in consumption in response to similar shocks. Furthermore, following a shock, households with access to M-PESA received funds from a larger network of senders, and from senders located further away. Digital payments thus appear to both facilitate the receipt of payments as well as strengthen and expand informal insurance networks among poor households (Jack and Suri, 2013). • Over a four-year period in Rwanda, researchers studying the quasi random timing and location of natural disasters found that people send mobile money to individuals affected by economic shocks. The recipients of shock-induced transfers also have larger social networks (Blumenstock et al., 2013).

³ http://sites.tufts.edu/jennyaker/files/2010/02/Zap_-26aug2014.pdf

⁴ http://newsroom.mastercard.com/2015/03/02/whats-next-digital-payments-can-empower-women/

⁵ Field experiments found that providing access to personal formal savings instruments increases female empowerment (Ashraf et al., 2010) and consumption and productive investment of female entrepreneurs (Dupas and Robinson, 2009). In Kenya, the arrival of mobile money transfers increased women's economic empowerment in rural areas, by making it easier to request remittances from their husbands who migrated to urban areas for work (Morawczynski and Pickens, 2009).

⁶ Researchers in Malawi found that direct deposit of cash crop receipts into savings accounts helped boost farmer productivity. The farmers who were offered this option and chose to participate ended up investing 13 percent more in farm inputs than those who weren't offered the option and received their crop sale proceeds in cash. Participating farmers saw a 21 percent increase in value of crop output and an 11 percent increase in household consumption after the harvest (Brune et al., 2013).

⁷ See for example http://www.netjournals.org/pdf/NJAS/2013/1/13-020.pdf, on the potential of agricultural insurance to support climate change adaptation

⁸ Rethinking Resilience in the Sahel, Mercy Corps 2014 https://www.mercycorps.org/sites/default/files/Mercy%20Corps%20Gender%20and%20Resilience%20September%20201 4.pdf

⁹ Ibid.

¹⁰ Ibid.

¹¹ http://newsroom.mastercard.com/2015/03/02/whats-next-digital-payments-can-empower-women/

¹² Connected Women 2015: Bridging the gender gap: Mobile access and usage in low- and middle-income countries. GSMA, 2015. http://www.gsma.com/connectedwomen/wp-content/uploads/2015/04/GSM0001 03232015 GSMAReport NEWGRAYS-Web.pdf

¹³ Mercy Corps Resilience Thinking Approach, April 2015 http://d2zyf8ayvg1369.cloudfront.net/sites/default/files/Mercy%20Corps%20Resilience%20Approach April%202015.pdf