S.8 Promoting the development of mobile-enabled insurance products against natural disasters for smallholder farmers

1. **What, in brief, is the solution?**

In the agricultural sectors of developing and emerging contexts, fostering the development of financial products that leverage mobile phone technology to provide insurance against natural disasters to smallholders can represent a gamechanger in promoting their resilience and livelihoods. Mobile technology makes it possible to overcome several of the core constraints that limit the provision of insurance products to vulnerable, financially underserved actors in the agricultural sector, which include (but are not limited to): the high levels of geographical fragmentation of rural dwellers; the high transactions incurred by private insurers; the lack of granular, timely and insightful data on insurance clients; the notable delays in handing out and receiving insurance pay-outs following a natural disaster; and the overall bureaucracy associated to stipulating an insurance policy.

2. **What was/were the source(s) from which this solution emerged?**

The technical experts from the RISE Team in the ESP Division, as well as the substantial literature on the topic, some of which is mentioned under Question 7.

3. **What problem is it trying to address within food systems?**

The income and livelihoods of smallholder farmers are increasingly affected by financial shocks and natural forces beyond their control, such as extreme weather or crop damage from pests and diseases. Globally, less than 20 per cent of smallholder farmers have insurance to protect themselves against the impact of unexpected events. Smallholder farmers have been unable to access indemnity-based insurance services, which require farm-level loss assessments. Low awareness and knowledge of insurance, coupled with the high cost of premiums, have restricted farmer uptake. Insurance providers have largely overlooked smallholder farmers due to the cost of acquiring and serving rural customers in remote locations, making farmers a less profitable customer segment for the industry.

The emergence of index insurance, which makes pay-outs based on a predetermined index rather than on-farm visits, has overcome some of the challenges of indemnity-based models, such as high operational costs, the cost of premiums and the ease of settling claims. However, insurance service providers still face substantial difficulties, such as poor historical and current weather data availability, inadequate government support to provide certain index insurance services and effective distribution. As a result, providing insurance to smallholder farmers remains a challenging and risky endeavour, that sees scarce participation on the part of private insurance companies and other relevant stakeholders (e.g. Ministries of Agriculture), unless substantial incentives and enabling innovations (i.e. mobile technology) are made available and adequately brought to scale.

4. **Why is addressing that problem important for achieving the goal of your working group?**

The insurance coverage gap for smallholder farmers is due to a range of different factors, including: lack of awareness and knowledge of insurance and services, associated to limited penetration of financial, services in rural areas, costs of insurance premiums and the cost of travelling to nearby towns to register for services and make claims.

By promoting the development of mobile-enabled insurance products against natural disasters for smallholder farmers, this solution will help to reduce their insurance coverage gap by responding to the main factors of exclusion in rural areas, and by doing so, will allow small scale farmers to sustain and promote their livelihoods and be more protected in case of shocks.

5. **How can this solution address that problem (theory of change)?**

There are vast opportunities for mobile network operators (MNOs) to use mobile technology to register and locate farmers, as well as to use mobile money to collect premiums and pay out claims. Over the last 10 years, index insurance services have been using mobile and satellite technology to digitize service creation and delivery — enhancing their potential to scale in the process.

In fact, the provision of insurance services through mobile phones (whether basic cell phones or smartphones) has long since proven to be one of the most game-changing lines of innovation in fintech. The following are some of the advantages of mobile technology in insurance provision:

- It allows the centralization and more effective management of the collection of data on clients' identities and activities, while substantially reducing administrative and operational costs;
- It facilitates registration and significantly expands distribution channels, allowing providers to reach a large population of smallholders based in remote areas that are completely disconnected from brick and-mortar banking and insurance services;
- It significantly reduces the time required to apply for a policy, settle claims and communicate with clients. It allows for easier bundling of insurance with other financial services (such as a mobile wallet), as they can all be channelled into the same platform;
- Most importantly, in the context of disaster risk management, the rapid provision of pay-outs following an extreme natural event, facilitated by mobile technology, represents a particularly critical advantage.

6. **Why does this solution align to the definition and criteria for a 'game changing solution' developed by the Summit?**

A. Impact potential at scale (including return on investment)
    a. Ample evidence (see Question 7) shows that mobile insurance is a considerably cheaper and more effective option to foster smallholders' resilience and overall livelihoods in the face of natural disasters compared to post-disaster direct payments (whether provided through mobile phones or with physical cash handouts). Providing mobile insurance in the frame of public programmes allows governments to set aside in advance specific portions of their budgets (destined to paying policy premiums) that are dedicated to supporting smallholders' recovery following a disaster, while the use of post-disaster direct payments is highly unpredictable and uncertain for public budgets, and it is not able to adequately cover smallholders' damages that they might have incurred following a disaster in a proportional and equitable manner.
B. Actionability (considering politics, capacity, costs)
    a. The rapid rise of mobile penetration levels in rural areas of developing and emerging contexts represents a clear trend in favour of the development of mobile financial services (including insurance) at an increasingly lower cost. Following the COVID-19

pandemic, there has also been a substantial increase in overall rates of mobile money service usage in developing and emerging contexts, which strengthens the case for the provision of insurance products through such channels.

C. Sustainability (i.e., the ability to keep delivering to 2030 and beyond)
    a. As illustrated in the previous paragraph, mobile money usage rates are rising exponentially in developing and emerging contexts. As such, there will be a steady increase in the number of private insurance providers, as well as MMOs, willing to engage in public-private partnerships focused on the design and provision of mobile insurance services for smallholders. Furthermore, rising mobile penetration levels and increasingly better awareness of rural populations over the use, challenges and opportunities of mobile money services are only going to make it easier to develop and provide insurance products through such channels

7. Existing evidence supporting the argument that this solution will work, or at least achieve the initial outcomes

There have been multiple pilots in recent years of successful mobile products that enabled agricultural insurance solutions for smallholder farmers, in a wide variety of contexts such as India, Kenya, Nepal, Pakistan and Sri Lanka. Key development agencies in the fields of rural finance and fintech for development have published studies and reports on the potential of mobile technology to facilitate the provision of agricultural insurance, including the GSMA, FAO, ILO, and USAID.

8. What is the current and/or likely political support for this idea?

Governments in developing and emerging contexts are increasingly petitioning for new solutions that enable agricultural insurance against natural disasters, especially in the face of the rising damage brought to agricultural sectors by the consequences of climate change. As such, it is likely that any initiative/project focused on enabling fintech solutions for agricultural insurance will be well received at public level, especially in SIDS and other countries particularly affected by climate change.

9. Are there certain contexts for which this solution is particularly well suited, or, not well-suited?

Mobile-enabled index insurance can only work in the presence of a number of key enabling elements at country level. The following list presents the core among such elements. Note that the majority of these factors can be strengthened as part of the same programme/initiative that sets out to develop mobile insurance products, although it must be noted that -if the following elements are absent in their entirety at national level- the whole project will probably not be sustainable in that specific country:

- A suitable ICT infrastructure that ensures mobile connectivity in rural areas
- Adequate levels of mobile penetration
- A strong data-gathering infrastructure that collects granular and precise weather data, especially in rural areas, which can underpin the index insurance mechanism
- Adequate capacity and expertise among Ministries and governmental agencies on the topic of agricultural insurance, to ensure that any public/private collaboration to enable such products has a chance of being effective and sustainable

- An advanced financial consumer protection regulation that protects consumers' data after being collected by the insurance company, while providing adequate grievance redressal mechanisms to defend consumers against fraud and scams
- An overall adequate regulation of the mobile money sector (neither too stifling of competition, nor too lax)
- Adequate levels of awareness on the part of the smallholder population on the mechanisms and challenges related to the use of agricultural insurance as a financial product