

Republic of the Union of Myanmar
Preparatory Survey on BOP business on
Weather Index Insurance in Myanmar
Final Report (Summary)

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Japan International Cooperation Agency (JICA)

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1. Overview of the Study

This is a summary version of the report titled “Feasibility Study for the Provision of Weather Index Insurance in Myanmar” conducted by Mitsui Sumitomo Insurance Co., Ltd., (MSI) in cooperation with PricewaterhouseCoopers Sustainability Co., Ltd.

1.1 Background and Objective of the Study

1.1.1 Overview of the Expected Business Scheme (Initial Proposition)

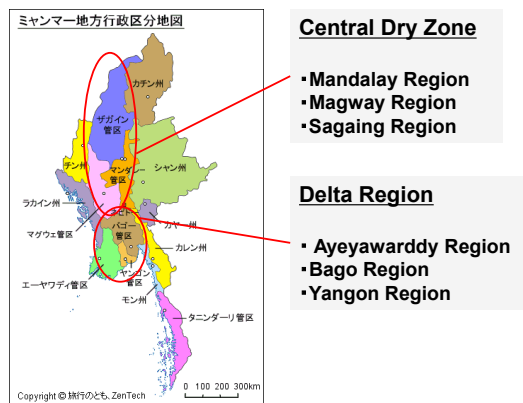
(1) Target Business Areas

The target areas of this business model cover regions where agriculture is the main source of income with weather risks of flooding and droughts.

Delta Region: Ayeyawaddy Region, Bago Region, Yangon Region

Central Dry Zone: Mandalay Region, Magway Region, Sagaing Region

The initial phase of the business model is to target the delta region, which has the largest volume of rice production, the main crop in Myanmar.



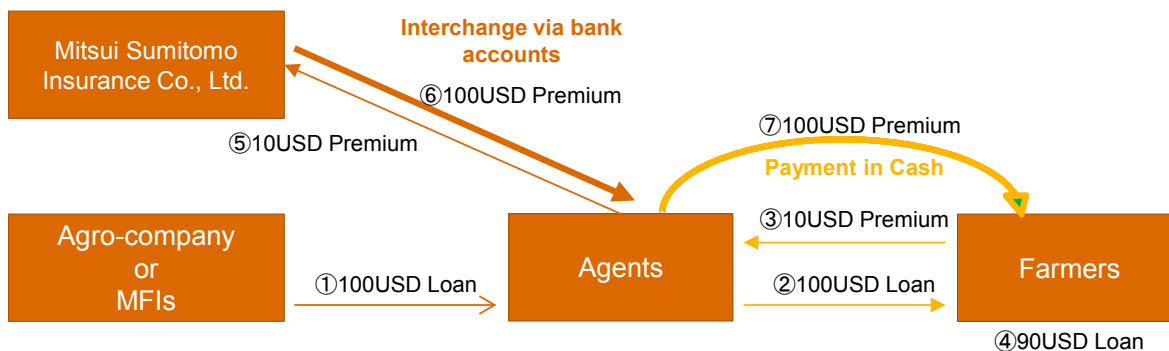
Source: Adapted from p.39 “Information Gathering and Verification on the Agricultural Sector of Myanmar” (JICA, 2013)

Figure 1.1-1: Expected Business Scheme

(2) Expected Business Scheme (Initial Proposition)

This business scheme envisages selling weather index insurance for rice farmers who suffer from excess rainfall in the Delta Region, and sesame and bean farmers suffering from droughts in the central dry zone. The insurance will be provided through loan schemes consolidated with a local agro-company and a microfinance institution in which these organisations mobilize their affiliated agents who reside in each township¹. The agents decide whom to loan through credential investigation and implement loaning and payout, and they will be acting as hubs for financing; collecting premiums and delivering payouts on behalf of MSI. Based on this model, an insurance premium will be levied automatically from the loaning amount.

¹ Government structure is followed by Division>State> District>Township

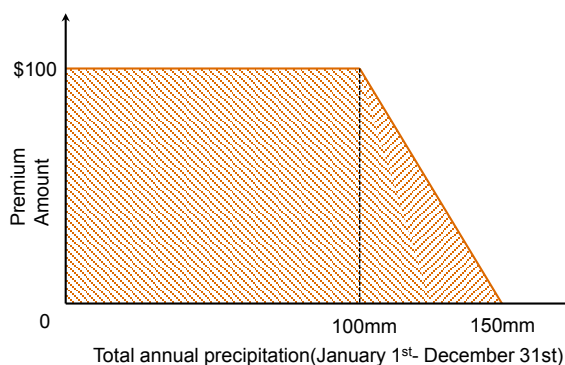


Source: Research Team

Figure 1.1-2: Expected Flow of Collecting Premiums and Payouts

Weather Index Insurance : Weather index insurance is a type of insurance which covers a financial loss incurred by severe weather risks. The premium for weather index insurance is determined by the index of total rainfall amount per period based on various weather data such as temperature and rainfall, which sets a threshold for a payout in advance (e.g. Triggers a payout of XX Yen, if exceed 50mm) so that the payout occurs based on the actual value of the index after the insurance period.

The graph on the right is a sample case of drought risk and the shaded area illustrates a payout range.



- ✓ Total annual precipitation measures less than 150mm: Indicated as drought, which triggers a payout. (For total annual precipitation between 100mm - 150mm: the amount of payout increases inversing the amount of rainfall, as described in the figure on the right hand.)
- ✓ Total annual precipitation measures less than 100mm: Payout of 100 USD.
- ✓ Total annual precipitation exceeds 150 mm: No payouts.

Source: Research Team

Figure 1.1-3: Sample Case of Weather Index Insurance Targeting Drought Risk

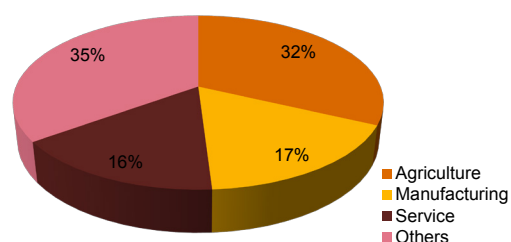
1.1.2 Background of the Study

(1) Background of Mitsui Sumitomo Insurance Co., Ltd.

MSI is one of the largest insurance companies in Japan and they have grown their business providing property and casualty insurance service especially in Asia. They carry a mission to support the future of the planet by forging vigorous social development through global provision of insurance and financial services. In 1995, MSI established a subsidiary in Yangon, Republic of the Union of Myanmar (Myanmar). MSI has been allocating Japanese staff from the headquarter office to the Yangon local branch since 1997, providing insurance services to Japanese companies, and they have been an active supporter of Myanmar's insurance market. They are also tackling the business of reinsurance² service with Myanma Insurance Company (MI) through providing an insurance capacity, for example, MSI paid 1.8 billion Yen for the reinsurance premium when Typhoon Nargis occurred. Since then MSI has been successfully building a good relationship with local stakeholders. As a leading Japanese insurance company, MSI believes that it is important to approach the poor to make a substantial contribution to the development of the country. They began to pay attention to agricultural farmers who constitute the national industry and have long been suffering from frequent flooding and droughts, trapping them in an endless cycle of poverty. Therefore, MSI has decided to consider introducing weather index insurance as it is clearly identified as an urgent need for farmers. Furthermore, the Indian branch of MSI has experience of developing and delivering micro-weather index insurance to farmers and they have successfully enlarged the business size into 200 million yen. In 2004, 2005, 2009, and 2010, MSI was awarded the "Best Dealer in Asia" by UK's monthly magazine *Environmental Finance*. With their active work on weather derivatives and outstanding performance of distributing weather-related transactions worldwide, challenging the poverty issue of Myanmar farmers is expected to make a significant improvement to the country's poverty issue.

(2) The Background of Myanmar

According to the statistics of the Foods and Agriculture Organization of the United Nations (FAO), the agricultural sector of Myanmar employs more than 60% of the total working force, contributing 30% of the national GDP. Meanwhile, the percentage of people living in poverty is estimated to be as high as 37.5%³, mostly implying agricultural farmers, thus solving poverty issues of farmers is considered top priority for both social and economic aspects. One of the reasons why poverty is concentrated in the agricultural sector is due to fluctuating incomes of farmers largely



Source: Re-printed based on the statistical data of FAO Statistics

Figure 1.1-4: GDP contribution by each sector

² Reinsurance defines as an insurance transferring an insurer's partial portion of risk portfolios to other parties to diversify risks and seek profits.

³ World Bank, Myanmar overview, <http://www.worldbank.org/en/country/myanmar/overview>

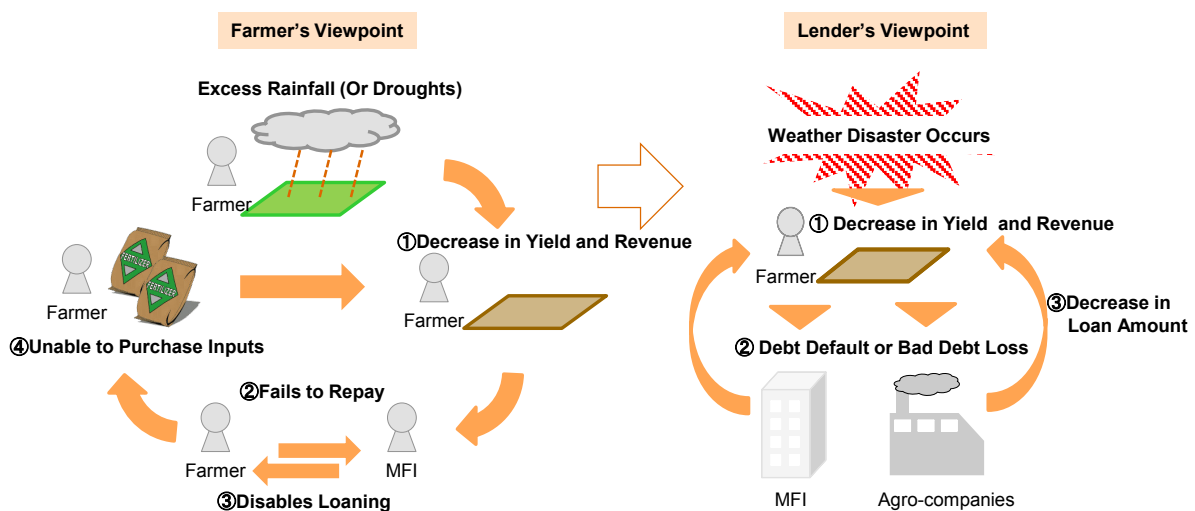
caused by weather risks, market rate risks, and pest risks.⁴ Damages sustained due to weather risks are particularly severe as there are no countermeasures, such as there are against pest risks, and more importantly, it influences all stakeholders in the industry including farmers, agro-related organisations and companies. Though there is payment support from the government when risks arise, the payment is limited to only 1% of the production cost, which is obviously not sufficient amount of support.⁵

Table 1.1-1 : Three Risks that Effect the Income Stability of Farmers

Type of Risk	Detail
Weather Risk	<ul style="list-style-type: none"> •Crop production is highly dependent on the weather, which is indicated as the highest risk. •In the delta region, excess rainfall and flooding are the principal weather risks. •In the central dry zone, droughts are the principal weather risk.
Market Rate Risk	<ul style="list-style-type: none"> •Market rate of crops tend to decline in harvesting seasons. •Poor farmers who do not possess any storage, sell their crops during harvesting seasons. •This results in no increase in income even if the production amount increases.
Pest Risk	<ul style="list-style-type: none"> •Farmers who cannot afford to buy pest control have high risks of crop damages by pests. •Once in several years, a mouse plague infests the crops causing massive crop losses.

Source: Research Team

There is a negative structural cycle triggered by weather disaster in the whole agro-industry. Decreased crop yields and incomes by weather disaster affect agro-companies and microfinance institutions that are loaning to farmers accordingly as which bad debts loss and default will likely to occur. Increasing losses will engender less loan amount in the next season, which is a heavy blow to farmers who rely on loans to purchase inputs further lowering their incomes. Alleviating the severity of the cycle is the key to solving the poverty issue in Myanmar.



Source: Research Team

Figure 1.1-5: Poverty Cycle in the whole Agro-Industry of Myanmar

⁴ Survey Result from Myanmar Farmer Association President

⁵ Survey Result from Myanmar Farmer Association President

1.1.3 Objective of the Study

This study aims to establish a business model to deliver weather index insurance for farmers residing in the central dry zone and the delta region by collaborating with local players. The study will assess the feasibility of the business by identifying the viability of selling insurance products and it will be followed by development of a tangible product design as well as drawing up a business process flow and business plan. The final goal of the business model is to provide weather risk mitigation of farm crops, which will result in revenue stability.

1.1.4 Development goals and consistency

As stated above, crop damage caused by weather disaster is a critical issue in Myanmar. An insurance service that abates such risks is highly needed which is what this business model is targeting. In addition, the business model aligns with the Millennium Development Goals (MDG), the policy of Myanmar government, and Japan's assistance policy.

(1) MDGs and the Policy of Myanmar Government

With Myanmar working on various MDGs policy, this business model is directly related to "Goal 1: Eradicate Extreme Poverty and Hunger" policy. The Myanmar government has set a goal from 1990 to 2015 to reduce the percentage of the population who are living on less than a dollar per day. To achieve this goal, the Myanmar government manifested to lower the poverty rate from 26% to 15% by 2015 (the poverty rate disclosed by the government is 26%, World Bank Statistics shows 37.5%⁶). The agricultural sector is strategic to alleviate poverty for the Myanmar government; in the inaugural speech of President Thein Sein, he stated, "Myanmar is a country that is based on agriculture, and will continue to pursue the development of agriculture for rural development and poverty reduction." With that said, the president has raised a policy to prioritise three elements in the action plan of rural development and poverty reduction; food security, raising incomes of farmers, and poverty reduction in correspondence to climate change. As the business targets poor farmers, making a direct contribution to eradicating poverty, it can be said that the business model has direct relevancy with Myanmar's government policy.

(2) Japan's Assistance Policy

Japan has risen to support the improvement of living standards of Myanmar citizens through medical and health, disaster prevention, poor and minority race support essentially through agriculture, agricultural development and rural development. The business model clearly coincides with the assistance policy, as it focuses on the agricultural sector and poverty support.

⁶ World Bank, Myanmar overview, <http://www.worldbank.org/en/country/myanmar/overview>

1.2 Study Methodology

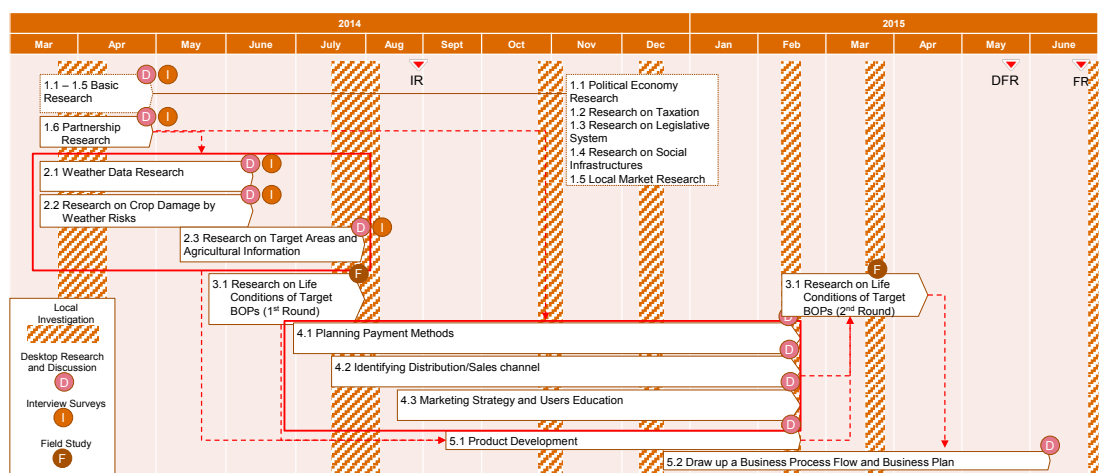
1.2.1 Areas of Study

As stated in Section 1.1.1, the areas of the business model will focus in the central dry zone and the delta region. Aforementioned, the initial phase will target the delta region, particularly Ayeyawaddy Region. For the central dry zone, the Mandalay region will be the primary target. The quantity of precipitation data obtained from five meteorological stations is adequate (Pathein, Hinthada, Zalun, Myaungmya, Maubin). The primary phase of the local study used Pathein's data and the secondary phase used Hinthada and Zalun's data.

1.2.2 Schedule, Methods and Targets

(1) Scheme Overview of the Feasibility Study

The study has been carried out as follows. Firstly, *basic research* (agenda 1.1-1.5) was conducted to gather information on the local market as well as *partnership research* (agenda 1.6) to forge a potential partnership. In parallel, *weather data research* (agenda 2.1) to identify and validate the reliability of weather data for the insurance product development and *research on crop damage by weather risks* (item 2.2) to identify target crops and weather risks were conducted. After identifying target crops and regional weather risks, *research on target areas and agricultural information* (agenda 2.3) was carried out to obtain necessary agricultural data for each region to design the insurance product, combined with *research on life conditions of target Base Of Pyramid (BOP)* (agenda 3.1) to understand their living conditions. Then, several discussions with the partner corporations that were identified in item 1.6 took place, to design the business model together which were *planning payment methods* (agenda 4.1), *identifying distribution/sales channel* (agenda 4.2), and *marketing strategy and users education* (agenda 4.3). Based on the above, *product development* (agenda 5.1) was conducted to establish a pilot insurance product with re-implementation on *research on life conditions of target BOP* (agenda 3.1) to confirm the purchase will of target customers.



Source: Research Team

Figure 1.2-1: Schedule of the Study

(2) Schedule of the Feasibility Study

The feasibility study occurred between March 2014 and June 2015, totaling 16 months. The shaded texts indicate that the research team from Japan traveled to Myanmar for local study 7 times in total (March-April, July-August, October-November, December in 2014 and February, March, and June in 2015).

(3) Study Method

The study method is categorised into three sections D, I, F according to the schedule above; (D) desktop research that is information gathering from documentation and the Internet, (I) interview surveys with agricultural related organisations and agro-companies, (F) field study that surveys farmers in a wide range.

- a. The flow of agenda in the first half of the study schedule (agenda 1.1-2.3) will be desktop research and discussion followed by interview surveys. (Category D and I)
- b. Conduct a field study of living conditions of targeted BOP (agenda 3.1). (Category F)
- c. Analysis and consideration based on the aggregated information (agenda 4.1-5.2) is applied as desktop research and discussion. (Category D)

(4) Targets of Interview Surveys and Field Study

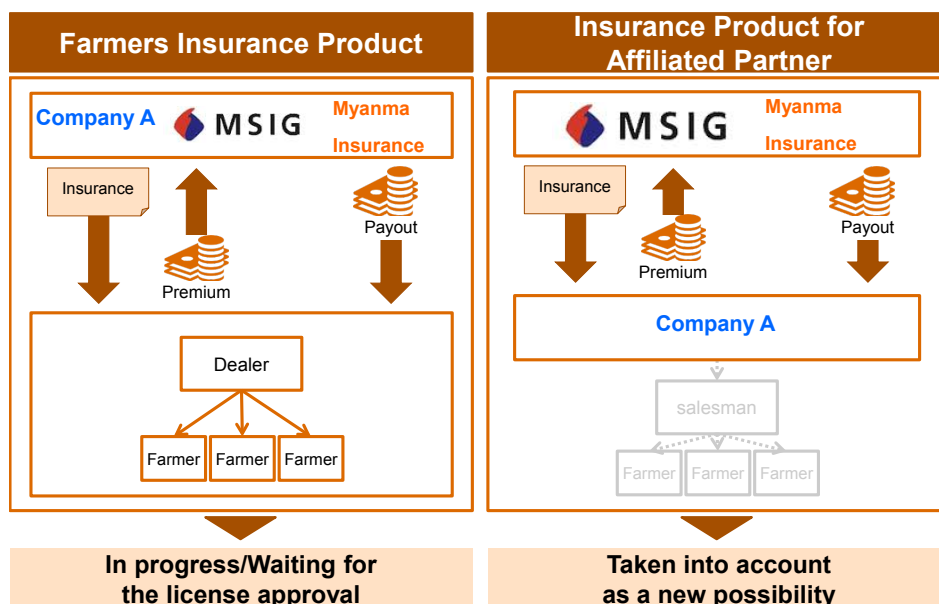
- a. The targets of interview surveys include governmental organisations, NGOs, corporations and researchers related to agriculture, insurance, or microfinance. (Category I)
- b. The target group and area of field study were farmers who reside in villages near the Patheingyi township of Ayeyawaddy region. The target group and area were appointed by Ministry of Agriculture and Irrigation (MOAI) voluntarily. The target group and area in the second round were farmers who reside in villages near the Hithanda and Zalun townships of Ayeyawaddy region. The target group and area were appointed by the local dealers from Company A voluntarily. (Category F)

2. Results of the Study

2.1 Conclusion

2.1.1 Obtained Information and Feasibility of the Business Model

Company A was selected as a partner company and has agreed to co-investigate, therefore implemented information gathering and developed a prototype of the insurance product together with MSI. Furthermore, the survey result which targeted potential customers identified that there is a certain receptivity of the insurance product from local farmers. Nevertheless, it turns out that acquisition of insurance sales license is currently difficult to be approved through several conferences with the Department of Insurance. (Note: Before the study was initiated until November 2014, the Department of Insurance had shown positive intention towards approving insurance sales license, which was the reason to conduct this study⁷⁸⁹) While the launch of the insurance product will take some time following the completion of the feasibility study, the business model aims to commercialize in the long term by continuing to discuss with the government towards launching the business. Along with this, selling an insurance product to Company A has now been taken into account as a new possibility. This product type will be purchased by Company A and through mobilizing the amount of premium paid by Company A, it will partially exempt the loan repayment of farmers who struggle to pay due to weather disaster. This insurance scheme will mitigate bad debts risk of Company A, enabling provision of an insurance service to farmers who are considered as high risk and out of present customer scope.



Source: Research Team

Figure 2.1-1: Future Plan

⁷ Myanmar Times (Monday, 08 September 2014)

<http://www.mmtimes.com/index.php/business/11587-government-hopes-to-start-insurance-scheme-next-january.html>

⁸ Asia Insurance Review (Nov 2014) <http://www.asiainsurancereview.com/Magazine/ReadMagazineArticle?aid=35601>

⁹ The Daily NNA Myanmar version (Wednesday, 06 November 2014)

2.1.2 Assessing Feasibility of the Business Model

(1) Overview of Feasibility Assessment

The following elements were included to assess the feasibility of the business model. While (a)-(f) were verified as feasible, some constraints were found for (g) and (h):

	a	Partnership with a Microfinance Institution with a Distribution Channel to Farmers	○
	b	Acquisition of Adequate Amount of Rainfall Data for Designing the Insurance Product	○
	c	Acquisition of Target Crops Production Data	○
	d	Measuring the Correlation of Farm Productivity and Rainfall Data	○
	e	Detailed Design of the Insurance Product	○
	f	Identifying Target Customers and Feasibility of the Business Model	○
	g	Acquisition of Insurance Sales License	△
	h	Identifying the Feasibility of Insurance Sales, Collecting Premiums, and Payouts	△

Source: Research Team

Figure 2.1-2: Required Elements to Assess the Feasibility and its Status

(2) a. Partnership with a Microfinance Institution with Distribution Channels to Farmers

- Throughout the partnership research of potential microfinance institutions and companies, Company A is selected as a partner.
- Partner selection focused on two elements: A partner organisation must have (1) a quantitative number of existing customers, and (2) private-sector-led operation to sustainable secure financial valibility.
- After several meetings with Company A, the negotiation has consented to work together from the investigating stage considering the business tie-up as well.

(3) b. Acquisition of Adequate Amount of Precipitation Data for Designing the Insurance Product

- Acquired all the necessary precipitation data(Ayeyawaddy region : Pathein, Maubin, Hinthada, Ngathaing, Zalun, Myaungmya; Mandalay region : Mandalay, Meiktila, Lun Kyaw, Yamethin, Myingyan, Hlaing Tat), assuring that there is a certain number of metrological stations that retain over 25 years of precipitation data.
- Verified that there is no critical issue regarding the accuracy of the data including the ratio of missing values, correlation of data, measurement method and quality control as well as the data's publication date.

(4) c. Acquisition of Target Crops Production Data

- Selected target crops and risks for the delta region and the central dry zone respectively.
- Crops production data and damage data of a Township level were acquired from the Ministry of Agriculture and Irrigation (MOAI).
- Due to a low reliability of paddy rice production data, flooded acre data was used for an alternative data source to design the insurance product.

(5) d. Measuring the Correlation of Farm Productivity and Rainfall Data

- The pilot insurance product is designed to target the risk of flooded rice paddies (excess rainfall) in the region of Ayeyawaddy with data collected through (5) and (4)
- Damage data and precipitation data in townships that are located within 35 km from five metrological stations in Ayeyawaddy region (Patheingyi, Hinthada, Zalun, Myaungmya, Maubin) were analyzed to measure its correlation. As a result, approximately 3-months-period after the plantation is defined as a risk period and the amount of rainfall from three consecutive days is set as the index.
- The analysis above has selected 7 townships from Hinthada district and Maubin district as target regions for the pilot insurance product due to their high correlation coefficient.

(6) e. Detailed Design of the Insurance Product

- Considering the average loan size and average input cost per acre of target farmers, the maximum payout amount is estimated to be 200,000 kyats (approximately 20,000 Yen).
- The loss ratio is set at 80 %.
- The index is set as the maximum amount of rainfall over 3 consecutive days during the specified period.
- Payout amount is determined by the actual value of the index (amount of rainfall in mm. over 3 consecutive days). Three index thresholds are fixed in relation to excessive rainfalls experienced over the last 25 years.
 - The first payout is triggered when rainfall levels equal to those experienced in the top 40% of flood years falls in 3 consecutive days. As index level rises, payout amounts increase at a fixed ratio until the second threshold is reached.
 - If the second threshold is reached, the ratio of payout increases and payout amounts will rise according to the actual value of the index until the third threshold is reached.
 - The third and final threshold is equal to rainfall levels experienced in the top 4% of flood

years. This triggers the maximum fixed payout (of 200,000 kyats) which will not increase even if rainfall continues.

(7) f. Identifying Target Customers and Feasibility of the Business Model

- An insurance product shall be designed for an area that has unique for an area that is within a 35-km radius from a metrological station, farm production data of each township, and a coverage area of each farmer and dealer who sells the insurance product. In the initial business phase, roughly 63,000 out of Company A's existing 90,000 customers in the target business areas (Hinthada district and Maubin district in Ayeyawaddy region) are expected to be customers of the insurance product (around 180,000 shares).
- The study has identified that farmers in the target areas are willing to purchase the insurance product. 85% of the target customers have indicated willingness to purchase with the product.
- Even if two specialized local staff are hired, the break-even point of customers is estimated to be around 370,000 customers. Currently, this is determined as a feasible scale.

(8) g. Acquisition of Insurance Sales License

- Throughout several conferences with the Department of Insurance, it is highly probable that the license to provide weather index insurance will not be granted soon. It is pragmatic to resume the negotiation process in the latter half of 2015 after the election takes place.

(9) h. Identifying the Feasibility of Insurance Sales, Collecting Premiums, and Payouts

- Company A dealers will be trained in sales and delivering user education, and they will become the core players to sell the product to their existing customers during the sales process. These dealers will be educating the customers on insurances. Sales brochures will be designed based on the materials used during the study and include feedback from uses.
- Initially, the scheme was designed to be integrated in the loan process of the Company A. When Company A provides loans for farmers who purchase products from the company, premiums were planned to be deducted from the loan amount and the payout from repayment amount. However, it tured out to be unfunctional as the insurance process is linked to the agricultural cycle, while the loan process occurs independenly. Thus, the insurance process will be separate from the loan process.
- The existing loan scheme does not transfer money through bank accounts, therefore the insurance product will transfer money in cash as well.
- Above three points should be more detailed once the sales license is approved.

2.2 Business Model

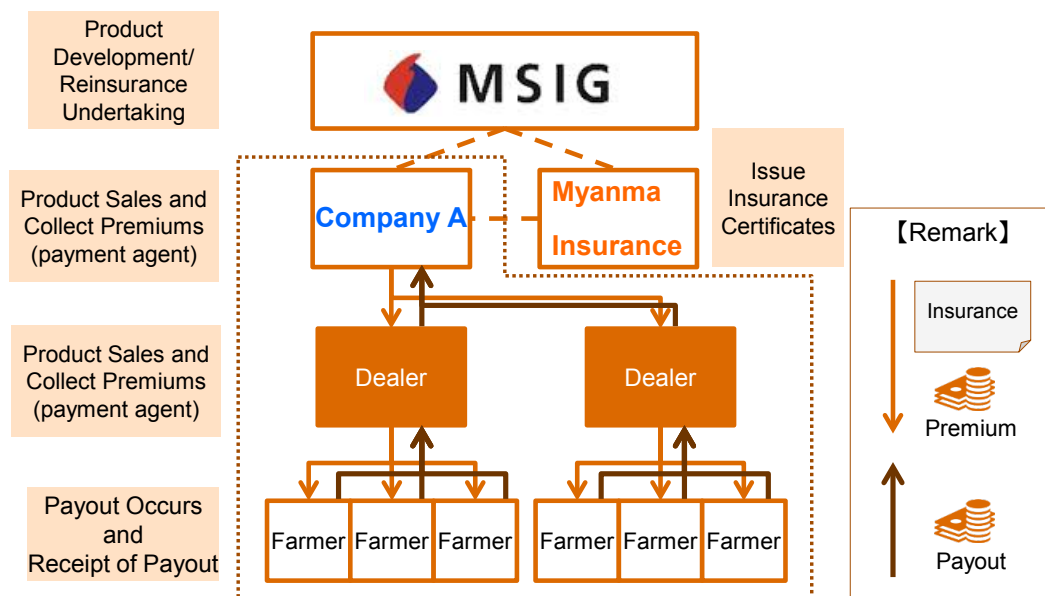
2.2.1 Overview of the Business Model

(1) Target Areas

Initially, the target risk of the insurance product is flooded rice paddies (excess rainfall) in the delta region during the monsoon season, targeting seven townships of Ayeyawaddy region (Hinthada, Zalun, Lemyethna, Ingapu, Maubin, Pantanaw, and Nyaungdon). Gradually the business will expand to other townships of Ayeyawaddy region as well as other regions such as Bago region and Yangon region. Along with this, the business will develop the business product to drought risks of sesame and beans in the central dry zone. In this phase, the business will target the Mandalay region and subsequently the Magway and Sagain regions.

(2) Expected Scheme

The first phase of the business scheme will be selling weather index insurance to rice farmers who suffer from excess rainfall in the delta region. MSI will partner-up with a local agro-company Company A, and the dealers of the company who locate in each township will function to collect premiums and deliver payouts on behalf of MSI. Nonetheless, even after sales license approval, there is a high possibility of the government requesting to cooperate with MI, therefore MSI will be most likely to implement reinsurance business.

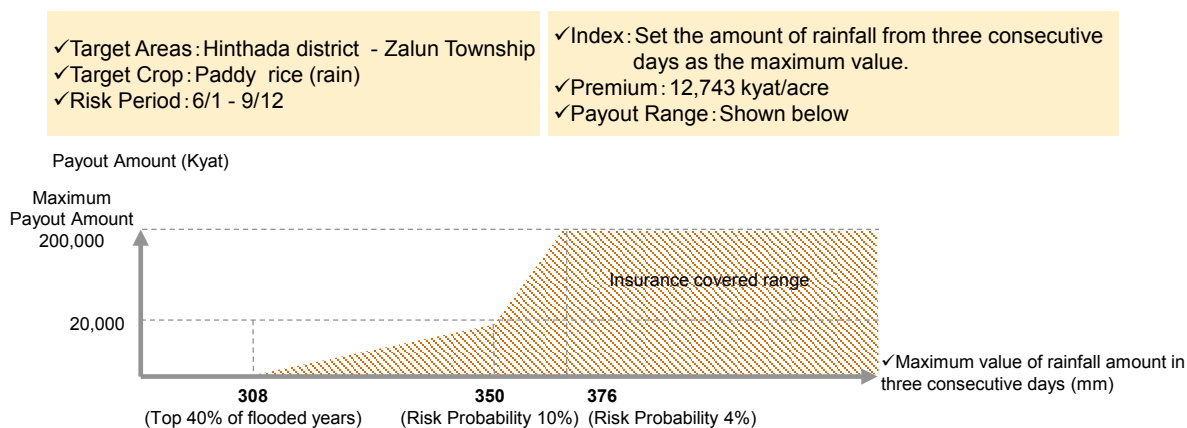


Source: Research Team

Figure 2.2-1: Overview of the Business Plan

The description of the insurance product targeting flood risk of rice paddies (excess rainfall) during the monsoon season is as follows: A target risk period is defined to cover Nursery stage and Vegetation & tillering stage, which are the highest risk periods of flooding. The index sets the amount of rainfall from three consecutive days as the maximum value. Premiums and payout fees vary among

areas. Moreover, as illustrated in the figure below, a payout amount changes depending on the quantity of the index (rainfall amount) along with the rate change which also varies depending on stages. The maximum payout amount per acre is set at 200,000 kyat, referring to and taking account of farmers' loaning amounts. Of the total revenue drawn from premiums, 80 % of it will be used for payouts (loss ratio 80%), 10% goes to Company A, and the remaining 10 % is for internal expenses and profits.



Source: Research Team

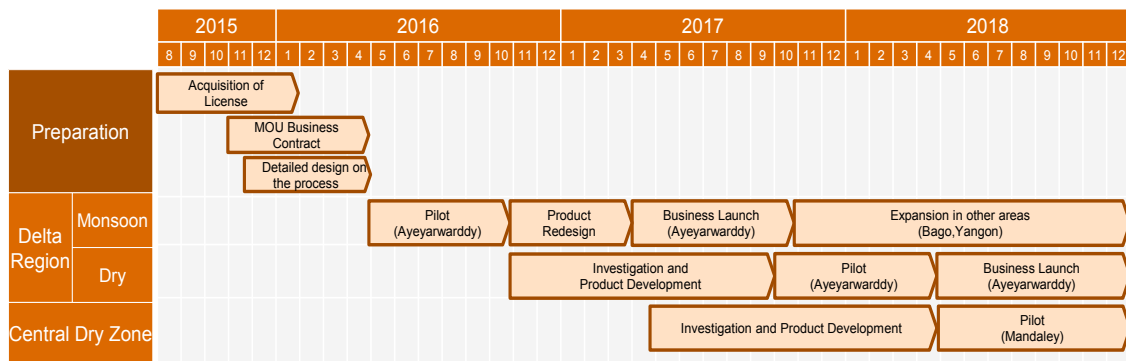
Figure 2.2-2: Insurance Product Sample

2.2.2 Remaining tasks and Way Forwards

As previously mentioned, the business scheme needs to (1) acquire insurance sales license and (2) establish a detailed design of the business process. Regarding (1), after reporting the study result to the Department of Insurance, MSI will proceed to discuss with him periodically alongside the negotiation of the license. In reference to (2), consultation on further details will be resumed after the license is granted.

2.2.3 Expected Schedule of the Business Launch

After the feasibility study is completed, business promotion towards the government will start in January 2016. When the sales license approval is expected, MSI will proceed to consult to seal contract with the partners. Pilot sales of the insurance product targeting flooded rice paddies (excess rainfall) risk during the monsoon season will be implemented in Ayeyarwarddy region for 6 months, following the completion of detailed designing on the insurance product and process of collecting premiums and payouts in April 2016. Subsequently, the pilot will expand the same product type to other delta regions in conjunction with developing and piloting an insurance product targeting rainfall excess risks of dry-farmed crops for delta regions as well as drought risks in central dry zones.



Source: Research Team

Figure 2.2-3: Business Launch Schedule

After shaping the sales basis, the second phase of the business model can expand the business scale by reaching to a lower income community compared to the current customer base of Company A or collaborating with other microfinance institutions.

2.3 Development Impacts

2.3.1 Development Issues and Evaluation Index of Development

Table 2.3-1 : Overview of the Project and Development Impacts Index

Category	Overview of the Project	Index
Overall goal	Mitigate weather risks of farm crops through provision of weather index insurance, resulting in revenue growth of BOPs in target areas and productivity improvement of agricultural sector.	Population below the Poverty Line
		Crops Productivity (Output (bskt) /Grow (acre))
Outcome	It will enable farmers to pay the loan return and increase their investment in agricultural practices when crop loss is compensated.	Investment Cost of Agricultural Practices
	Follow-up financing will enable farmers to purchase inputs such as fertilizers and seeds.	Input Cost of Fertilizers and Seeds
	Purchasing insurance will stabilize the livelihoods of farmers.	Average Revenue of Farmers in Target Areas
Output	Farmers purchase weather index insurance.(*1)	Number of Insureds
	Payouts are made to each household when disaster occurs.(*2)	Total Payout Amount
	The number of Awba's loaning customers increases.	Number of Awba's New Customers
	Generate new employment of insurance sales agents.	Number of New Employed Agents
	Insurance education will be given to farmers through dealers.(*1)	Number of Farmers Received Insurance Education

(*1) This does not apply to the insurance product targeting the partner corporation.

(*2) Payouts of the insurance product for the partner corporation will be delivered to the partner corporation.

Source: Research Team

The development goals this business will contribute are solving the poverty issue of farmers and productivity improvement of the agricultural sector. More than 60% of the farmers in the target areas are classified as BOP. Increasing the revenue of farmers is crucial since crop production is largely dependent on weather, aggravating the poverty level of BOP. In order to eradicate poverty, enhancing

agriculture- the main industry of Myanmar- is absolutely vital, thus productivity improvement is an extremely significant goal set.

To solve such development issues, an evaluation index was established to measure its impacts by categorising the metrics into overall goal, outcome, and output based on the business model.

2.3.2 Development Impacts Scenario (Baseline Data/Target Value)

(1) Baseline Data

The following table describes the base line data and its information source. Since the business is not officially launched yet, the impact metric for the baseline data is still zero. The statistical data used are the latest update available.

Table 2.3-2: Baseline Data and Information Sources

Category	Index	Baseline Data	Annual Year
Overall goal	Population below the Poverty Line	33%	2007
	Crops Productivity (Output (bskt) /Grow (acre))	67.43 (Ayeyawaddy division / Paddy rice (rain))	2013
Outcome	Investment Cost of Agricultural Practices	The number is determined after the official launch of the bussiness	-
	Input Cost of Fertilizers and Seeds	The number is determined after the official launch of the bussiness	-
	Average Revenue of Farmers in Target Areas	1,587,164 kyats	2015
Output	Number of Insureds	0	2015
	Total Payout Amount	0	2015
	Number of Awba's New Customers	0	2015
	Number of New Employed Agents	0	2015
	Number of Farmers Received Insurance Education	148	2015

Source : Agriculture Statistics, Ministry of Agriculture and Irrigation, Myanmar (Date Referred: March 9th, 2015)
<http://www.moai.gov.mm/images/download/agri/11.CropProduction.pdf>

(2) Development Impacts Scenario

One year after the study was launched, development impacts scenario was established as shown in the table below. In the initial phase of the business, pilot sales of the insurance product will be implemented only in a few parts of Ayeyawaddy region, thus development impact may be limited. However, from the following year after that, it is expected that the impact will gradually rise as the variations of insurance product will increase combined with business expansion across wider areas.

Table 2.3-3: Comparison of Expected Development Impacts

Category	Index	Baseline Data	Goal (1 Year after the Business Launch)	Goal (5 Year after the Business Launch)
Overall goal	Population below the Poverty Line	33%	25%	20%
	Crops Productivity (Output (bskt) /Grow (acre))	67.43 (Ayeyawrdy division / Paddy rice (rain))	69 (Ayeyawrdy division / Paddy rice (rain))	71 (Ayeyawrdy division / Paddy rice (rain))
Outcome	Investment Cost of Agricultural Practices	The number is determined after the official launch of the bussiness	-	-
	Input Cost of Fertilizers and Seeds	The number is determined after the official launch of the bussiness	-	-
	Average Revenue of Farmers in Target Areas	1,587,164 kyats	1,600,000 kyats	1,700,000 kyats
Output	Number of Insureds	0	63,000	70,000,000
	Total Payout Amount	0	1,800,000,000 kyats	21,000,000,000 kyats
	Number of Awba's New Customers	0	600	7,000
	Number of New Employed Agents	0	2	30
	Number of Farmers Received Insurance Education	148	90,000	1,000,000

Source : Agriculture Statistics, Ministry of Agriculture and Irrigation, Myanmar (Date Referred: March 9th, 2015) <http://www.moai.gov.mm/images/download/agri/11.CropProduction.pdf>

3. References

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