

**‘ADB Climate and Disaster Risk
Insurance Forum 참석 출장 보고
– 마닐라 ADB**

2024. 9

I. 출장 개요

□ 목적

- ADB의 Climate and Disaster Risk Insurance Forum session 7의 패널리스트로 참석, 국내 농업재해보험, 농작물재해보험의 현황 등을 공유하고 관련 내용에 대해 논의함.

□ 기간·장소 및 출장자

구분	내용
출장기간	‘24.9.19(목) ~ 9.21(토)
출장지역	필리핀 마닐라 ADB
출장자	성재훈 연구위원(한국농촌경제연구원),

□ 출장자 주요 업무

- Session 7의 패널리스트로 참석, 국내 기후변화 대응 및 농업재해보험의 현황에 대해 설명함.

□ 출장 일정

일자	출발	도착	주요일정	비 고
1일차 9/19(목)	인천 (ICN)	필리핀 (MNL)	○ 출국 - 인천(06:45) → 마닐라(10:9)	대한항공 KE623
2일차 9/20(화)	ADB		Climate and Disaster Risk Insurance Forum 참석	
	필리핀 -마닐라 (MNL)	인천 (ICN)	○ 입국 - 마닐라(23:30) → 인천(04:35)	대한항공 KE624

II. 주요 활동

1. Climate and Disaster Risk Insurance Forum의 2일차(09/20) 일정에 참여함.

시간	세션
09:00-10:00	Session 6: Innovative disaster risk transfer products
10:00-11:00	Session 7: Managing weather risks for crops and agriculture value chains
11:00-11:30	Coffee Break
11:30-12:30	Session 8: De-risking energy efficiency investments
12:30-13:30	Lunch
13:30-14:30	Session 9: Role of Community-based Partnerships
14:30-15:30	Session 10: The way forward
15:30-15:45	Closing Remarks

○ 주요 내용

- 세션 별로 다양한 주제로 토론이 이루어짐. 구체적으로 Session 6에서는 다양한 보험 상품(parametric insurance, Catastrophe insurance wrappers, Heat stress insurance 등)이 소개됨. 특히, AI를 활용한 위험 및 보험 설계의 한계점과 극복 방법에 대해 논의함.
- Session 8에서는 Energy efficiency insurance, Energy saving insurance 등 에너지 절감 관련 투자 위험을 줄이는 보험과 금융 상품에 대해 논의함.
- Session 9에서는 공동체와의 협업의 필요성과 취약 계층의 재난 대응력 향상을 위한 보험의 필요성에 대해 토론함.
- Session 10은 ADB가 기후리스크 대응을 위해 2030년까지 우선적으로 진행해야 할 과제들에 대해 논의함.
- Session의 대부분이 ADB가 진행하고 있는 사업과 밀접히 연관되어 있는 사업들로 구성되어, 현장에서 실제 일어나는 일들을 파악하는 데에 도움이 됨. 다만, 대부분의 사례가 국내 여건과는 큰 차이가 나는 것으로 생각됨. 다만,

session 8에서 논의된 에너지설비시설에 대한 투자 보험은 농업부문에서 고려해 볼 수 있을 것으로 생각됨.



Session 9 진행 장면

2. Session 7 패널리스트로 참석 및 토론함.

- ☐ Session 7은 소농의 이상기후 위험을 감소를 위한 보험의 역할을 주제로 토론이 진행함.
- ☐ 토론은 Lorenzo Chan(CEO, Pioneer Inc), Brandon Mathews(CEO, Stonestep Ag), Maria Mateo Iborra(CEO, IBISA Network), Anuj Kumbhat(CEO, WRMS Global), Laurent Bossolasco(Sustainability Manager, ECOM)이 참석하였으며, 좌장은 ADB의 Arup Chatterjee가 맡음.
- ☐ 토론의 주제에 맞추어 각 기업들이 제공하고 있는 보험 상품의 특징과 운영상의 어려움 등을 논의함.
 - 소농을 대상으로 한 보험 상품의 경우, tangibility, cost, trust를 중심으로 설계되어야 함.
 - private-public partnership은 자료 공유 등을 통해 보험 확대에 긍정적인 영향을 미침.
 - 보험 설계에 있어 위험을 체계적으로 분산 및 공유하는 것이 필수적이며 이를 위한 다양한 방법이 시도되고 있음.
- ☐ 이상기후로 발생과 영향에 대한 국내 현황과 농작물 재해보험의 역할에 대해 설명함. 행사 전 좌장과의 사전 미팅과 원내 전문가(김태후 박사)와의 면담을 바탕으로 작성한 토론 내용은 부록을 참조 바람.

부록: Session 7 토론 주제 및 관련 답변

Q1. How have recent climate trends affected agricultural practices and risk management strategies? What is the role of insurance in managing climate risks?

I think the most recent extreme weather events would be a good example to answer the first question. The winter of 2023-2024 was particularly cloudy, leading to a reduction in solar radiation necessary for crop growth. As a result, the production and quality of horticultural crops, especially fruits and greenhouse crops, declined significantly in 2024, causing a sharp increase in the prices of horticultural products. This surge in horticultural crop prices also contributed to overall domestic inflation through its impact on the food supply chain. The reduction in production and quality of horticultural products caused by insufficient solar radiation was uncommon in South Korea. Now South Korea is experiencing unusual long heat waves, and it would affect negatively production and quality of field crops, especially cabbage and red pepper. As the example showed, the frequency and severity of extreme weather events in South Korea have increased, and the types of these events have also become highly diverse. Thus, it would be impossible for farms to manage the weather risk solely through their own efforts, leading to the expansion of crop insurance, instead of traditional price supports or post-disaster compensation.

Due to increasing climate risks and the government's active support, crop insurance has rapidly grown since its introduction in 2001. Specifically, crop insurance, which started with two products—apples and Korean pears—in 2001, expanded to cover 70 products by 2023, and the subscription rate has increased to about 50% of all eligible farms.

In 2024, the Ministry of Agriculture, Forestry, and Rural Affairs is working to introduce a new farm income and management safety net with two pillars—direct payments and agricultural insurance—to increase farms' income level and mitigate their income volatility. Efforts are also being made to expand revenue protection crop insurance to compensate for price drops due to quality deterioration and minor losses resulting from unexpected weather events.

For the second question, I think the results of KREI's research projects analyzing crop insurance effects would be useful. The results could be summarized by three points. First, according to an analysis of farm economic surveys in Korea, the income fluctuation of insured farms is lower than that of uninsured farms, showing a decreasing trend over time. Second, the results show

that crop insurance increases investment in farms. Lastly, the results show that crop insurance did not distort farms' land use incentive, even though it was highly subsidized by government. To sum up these results, the primary role of crop insurance has played a significant role to stabilize farm management and ensure agricultural production in response to climate risks.

Q2. Please share Korea's experience in implementing crop insurance programs. What has hindered the uptake of crop insurance in Korea? What actions has the government taken to help overcome these barriers?

It is undeniable that crop insurance has played a significant role in managing production risks in Korea. However, the fact that the subscription rate is only around 50% indicates there are still barriers to its further expansion.

First, despite government subsidies, the insurance premiums for newly included products or products with low subscription rates remain high, making it difficult for farms to participate in crop insurance. To address this, the government is exploring the development of new insurance products, adjusting premium structures, and offering differentiated support for insurance premiums to encourage greater participation of farms growing crops with lower subscription rates.

The second barrier is more practical. The concentration of underwriting and loss adjustments during specific periods poses challenges to ensuring the reliability of these processes. This is particularly true for revenue protection crop insurance, which the government is actively seeking to expand. To determine actual revenue accurately a comprehensive investigation of harvest volumes across all farms is required during the short harvest period, regardless of whether there has been any damage. This implies that if revenue protection crop insurance is expanded, the cost of loss adjustment could increase significantly. To mitigate this, the government is working to improve the expertise of loss adjusters and enhance the efficiency of underwriting and loss adjustment processes by utilizing drones and ICT technology. In addition, to reduce the need for extensive harvest volume investigations, the government is considering offering incentives, 5% buy-up coverage, for farms who submit revenue documentation for revenue protection crop insurance.

Q3. Please recommend one action that is needed to move the needle forward or a key takeaway for the session.

The primary action I recommend is to maintain and ensure the reliability of loss adjustment. According to a survey conducted among farmers growing products with low subscription rates, unfair loss adjustment is one of the significant reasons for not subscribing to crop insurance. A decline in the reliability of loss adjustment could not only spread negative perceptions of crop insurance but also lead to moral hazard among farms. I believe the various technologies mentioned by the panelists in this session will greatly contribute to securing the reliability of loss adjustment in the future, and sufficient R&D and pilot projects should be conducted to achieve this.

From the perspective of a researcher studying climate risks, I would add one more point. To enhance farmers' resilience to climate change, crop insurance needs to strengthen its linkages with other policies. Specifically, crop insurance should be designed from an integrated perspective, incorporating ongoing capacity-building and technology dissemination projects, direct payments, and price support policies. This approach would enhance both the resilience of farms and the efficiency of climate policies.