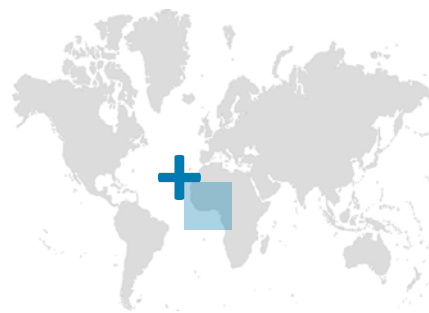


INFOCUS

Design of a Flood Cover Insurance for Public Assets in Ghana



SUBJECT

The Greater Accra Metropolitan Area (GAMA), Ghana experiences perennial rain events on an almost annual basis. This heavy rainfall causes significant economic and physical losses to the Accra region. For instance, approximately 40% of all assets managed by Accra Metropolitan Assembly (AMA) have reported flooding in previous years, while 40 AMA-managed assets are located in major flood zones. Estimates point to roughly ninety million Ghanaian Cedi (GHS) of material damages for these premises.

Developing an appropriate insurance product is thus vital in coping with these flood risk damages. It is one of the key parts of the integrated flood risk management project in GAMA — a joint develoPPP.de project by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Allianz Reinsurance. As a part of this project, an indemnity-based flood cover for three municipalities (GA East, GA West, and AMA) has been designed. It covers the aggregated losses of all insured

assets managed by a municipality that are hit by a severe single flood event. The claims pay-out includes replacement costs of insured premises, unsecured inventories, and a 20% buffer for emergency relief measures. The scope of this project is limited to the geographical boundaries of GAMA to ensure a focused product design.

This insurance product is not only relevant for GAMA, but also acts as a serious alternative risk financing route for other regions that regularly and increasingly experience severe flooding. The design of this product can be easily adapted to different municipality's needs, if sufficient portfolio and loss data as well as the willingness to invest in risk reduction and preparedness activities are available. Advantages include the benefits of prevention vis-à-vis curing, as well as speed and certainty of damage cover.

On behalf of





CHALLENGES

Several challenges arose during the design of the insurance product:

- **Insufficient data regarding historical losses as well as registration of assets.**

As the Ghanaian insurance market is relatively less mature, there is a lack of adequate data on historical losses, gaps in weather stations' coverage as well as an incomplete registration of public assets. This data is necessary to measure both the risk and exposure of GAMA assets to excessive flooding. However, the available data from weather stations did not allow for granular modelling and reliable monitoring of rainfall and flood events. Further, each region in GAMA had data gaps in their public asset register. Since this data defines the vulnerability of municipality assets to excessive flooding, it is vital that these gaps are identified and standardized across all public asset registers.

- **Premium affordability.**

Although Ghana has not been classified as a low-income country by the World Bank since 2011, it still belongs to the middle-income countries. Naturally, the question as to whether premiums on insurances are feasible to pay in such regions is still present. Even modest premiums can be very concerning and can pose an obstacle to the affordability of the offered insurance product. Solving the overall issue of premium affordability in combination with the high flood risk in several parts of Accra remains a tough and heavily debated subject across many areas.

- **Lack of risk awareness.**

Lastly, it is important to note that at the start of the project, a robust understanding of climate change, options for adaptation, and (financial & flood) risk management strategies did not widely exist among stakeholders. This posed an additional challenge to the product implementation, in particular to the premium affordability. Since premium affordability remains a challenge in the area, stakeholders need extra guidance in understanding the process behind how premiums are set and why they remain expensive – even when no severe flood event has taken place over a long period of time.

SOLUTIONS

Several solutions were incorporated in the project to combat the aforementioned challenges:

- **Filling the gaps in data registration and risk assessment.**

To solve this challenges, GIZ and Allianz Reinsurance cooperated with the dutch consultancy firm HKV, which analyzed the flood exposure of assets and filled data gaps in the public asset registers. Moreover, HKV developed a forward-looking exposure model including tailored vulnerability curves which enabled Allianz to assess the vulnerability and flooding risk of the individual assets and to calculate the total losses for different flooding scenarios. These calculations were used as a basis for the insurance product and to tailor the insurance cover to the specific needs of each municipality.



- **Making premiums more affordable.**

For this project, different types of insurance coverages (indemnity, index, and hybrid) have been tested to enable more premium affordability. For this project's purpose, an indemnity coverage has been chosen due to the benefits it provides: There is no basis risk for the client in contrast to index-based insurances, it is easier to understand, and has a cheaper coverage given the lack of loss data. In addition, the proposed design includes an opportunity to reduce the premium through incentivizing loss prevention and adaptation measures. A premium reduction could be available already upon commitments to adaptation measures. Moreover, the project will support municipalities in strengthening their capacity to afford an insurance cover through developing a Disaster Risk Management (DRM) Budget Analysis Tool. The DRM Budget Analysis Tool allows municipalities to assess how a given budget can enhance their capacities for DRM. This helps municipalities to identify existing potentials for more sustainable budget management for DRM and thus, the potential to afford an insurance cover. The delivery of the tool is planned for Q4 2021.

- **Increasing awareness**

Open dialogues and communication lines with GAMA municipality representatives and key stakeholders were facilitated through inception and validation workshops, as well as field visits. The workshop aimed to provide an understanding of the exposure model and the product concept, connect parties to HKV, and to have a better understanding of the stakeholders' needs. In addition, in a series of dedicated workshops the project members were able to elaborate on the prevention and adaptation possibilities that insurance can offer as a component of an Integrated Disaster Risk Management Approach.

LESSONS LEARNED

Take-aways from this project are as follows:

- **Aligning previous stakeholder efforts.**

Completing the missing information in regards to historical losses, hazards, and registration of assets is a substantial undertaking. Using the same technical provider (HKV) working for the World Bank's "Greater Accra Resilient and Integrated Development" project saved time and funds and enabled a deeper analysis than envisaged. For example, it was learned that pure excess rainfall index insurance may not be optimal for urban infrastructure as this pure index solution would be too expensive to implement in the targeted regions.

- **Premium payments still stay an issue.**

While this insurance product tackles the issue of premium affordability through a smart product design, it does remain a critical issue as insurers cannot go without a risk-adequate premium. Municipalities may still encounter difficulty in acquiring support for premium payments, although they do receive support after disasters—a Samaritan dilemma.

- **Importance of risk awareness.**

Lastly, it is important to note that for this type of insurance product to optimally function, key stakeholders need to grasp the significance that such solutions can offer. It is advisable in future projects to spread more risk awareness in earlier stages, as interest in insurance solutions seems to be quite high. In case of sufficient risk prevention and adaptation measures, insurance can assume the residual risk on a modest premium level. Furthermore, contingency planning is also crucial in spreading risk awareness through a sovereign and sub-sovereign alignment. Municipalities should align their individual contingency plans with the contingency plan put in place on the national level in order to identify overlaps and synergies that can increase the level of resilience while saving funds through re-using what is already in place. This participative approach enables the coordination of stakeholders across the board (incl. police, firefighters, and hospitals) that not only can increase the level of preparedness but also enhance the understanding of risk.

OUTCOMES

The final insurance product concept is an indemnity-based solution, as a result of the advantages described above. At the moment, this insurance product has not yet been rolled out into the market. However, it was presented to the three municipalities in the form of personalized pitches. The primary takeaway from these discussions was that there exists a genuine interest in the design among all three municipality representatives. This is because no other party has offered such a solution yet, and thus this insurance design is the first of its kind. Due to the interest of the municipalities, the National Insurance Commission Ghana approved the indemnity-based solution for a trial in a sandbox approach to be implemented by Allianz Ghana. The sandbox approach will secure a safe environment for the product to be tested over the course of approximately one year. If the product is deemed successful after the completion of the pilot, it will be entered into the market via a public tender, to ensure that all local insurance players have the equal opportunity to offer this insurance product.

Thus, this project was successful in (1) trying to understand and quantify flood risks with the involvement of local and international stakeholders, (2) providing opportunities to improve an overall risk management, and (3) developing insurance solutions to transfer residual risk. Altogether, this provides financial stability to the stakeholders and greater freedom of action when a catastrophe strikes. Looking forward, meteorological and geographical data will be further analyzed and improved also as part of future projects in Ghana. Additionally, developments will continue to examine the potential of leverage and synergy effects of insurance products for urban resilience.



Activity name

Design of a Flood Cover Insurance for Public Assets in Ghana

Focus area

Greater Accra Metropolitan Area (GAMA), Ghana

Local partners

- Administration of GA East, GA West and AMA
- GMet—The Ghana Meteorological Agency
- NADMO—The National Disaster Management Organisation

Target group

Public assets under the control of assemblies in GAMA

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This activity was part of the project...

Developing disaster risk management approaches for climate risks

Project duration

01.01.2018 - 30.09.2021

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For more information please refer to the factsheet “Developing Risk Management Approaches for Climate Risks in Ghana”.

