

# GEO CLIMATE POLICY AND FINANCE WORKSHOP

## SAGABI Project : Pilot Public Asset Insurance – Climate Finance Mechanism for Cities, Ghana

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## Abstract of Presentation

Risk transfer mechanisms like insurance are an important part of a holistic risk management concept. For rare, very heavy Nat Cat event, major financial impact won't be avoided, even when risk prevention & adaptation measures have been properly implemented.

Insurance solutions become essential to enable fast recovery and sustainable financing. However, affordable and adequate insurance is not possible without the assessment and quantification of the underlying risk.

The lack of proper risk quantification is one of the reasons for the insurance protection gap in many regions of the global South, e.g. in Accra.

In a public-private partnership, GIZ, Allianz Re and HKV consulting have pioneered to develop a holistic risk management concept for three different municipalities in Accra, the capital of Ghana, that integrates an innovative and data driven insurance solution. As a cornerstone, HKV developed a flood risk model of Accra, which was later used by Allianz to develop pilot insurance products in a scarce environment.



## Climate Risk Management – the concept

### Prevent

This phase comprises all the measures that help prevent or minimize possible damage from an event.

### Recover

After a natural extreme event hits, infrastructure and other parts of society must be rebuilt, so that people can resume their livelihoods as quickly as possible.

### Respond

This phase comprises all emergency measures aimed at saving human lives in the event of a natural disaster.

### Retain & Transfer

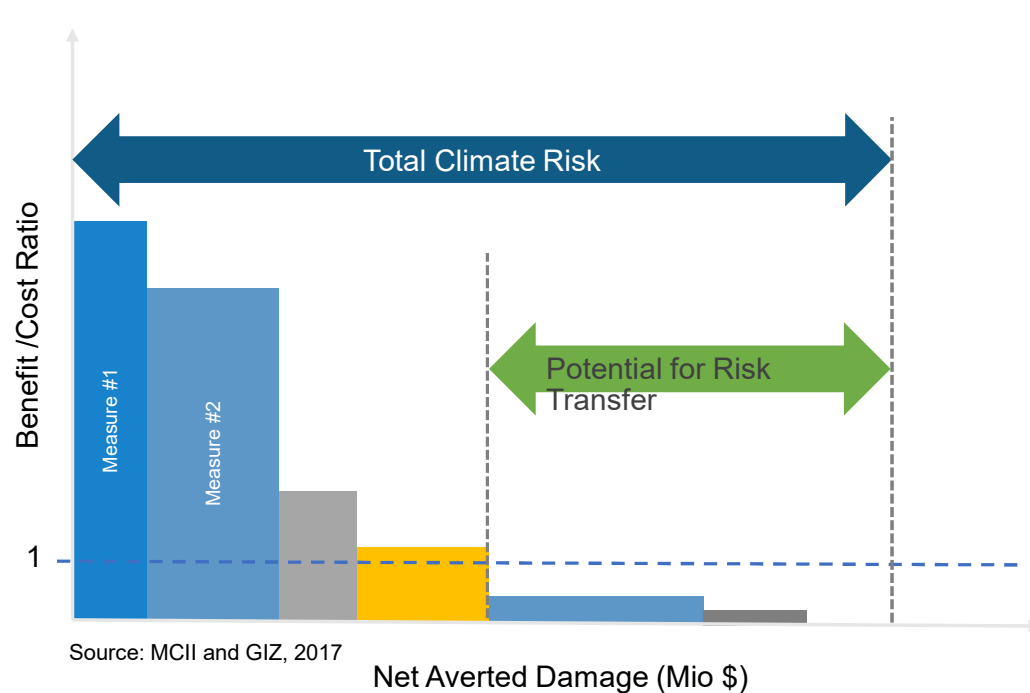
Residual risk can be transferred to third parties using financial instruments such as insurance.

### Prepare

Preparedness contains a complex set of activities such as setting up early warning systems, developing contingency plans, organising various activities such as stockpiling of equipment, and coordination and training as cross-cutting issues.



## Climate Risk Management – the idea



Benefits
<ul style="list-style-type: none"> <li>• Sets the objective grounds for decision making which measure should be realized</li> <li>• The residual risk should be transferred</li> <li>• Incentivizes climate change adaptation, mitigation and disaster risk reduction.</li> <li>• This can be extended towards social and ecological impacts (Lowers “1”)</li> </ul>

## The Roadmap for ICRM - Urban Resilience in Ghana



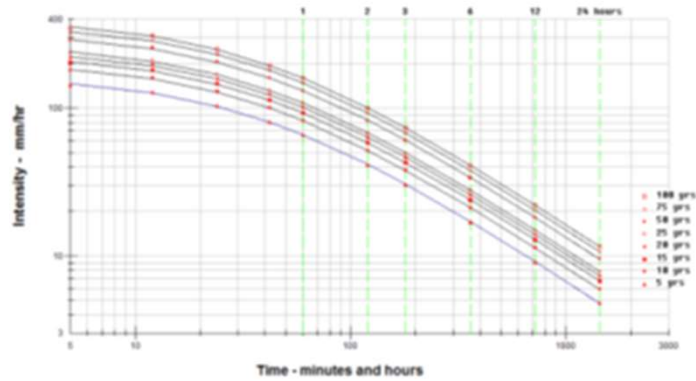
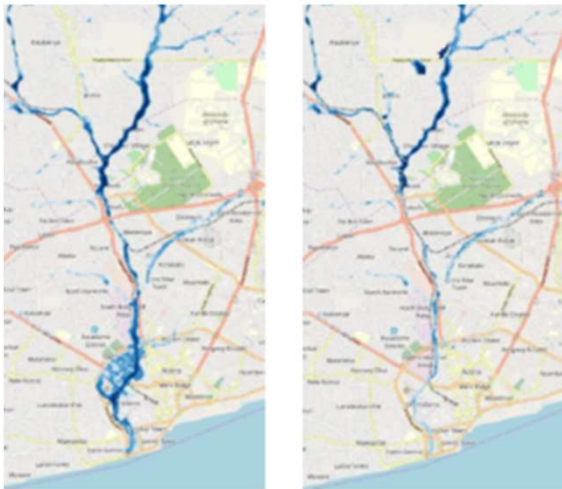
“We were saved by all that risk data, once we realized we’d forgotten to order sandbags.”



## Flood risk model



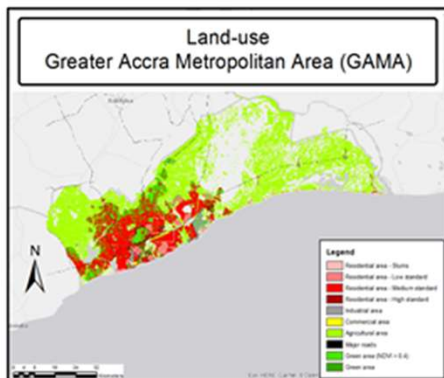
## Dynamic Maps



## Flood risk model



## Exposure data

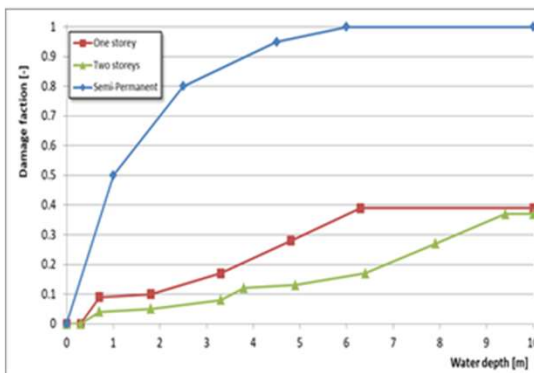




## Flood risk model



## Vulnerability and damage



Impact  
assessment  
2015





## From risk assessment to tailored risk transfer solutions

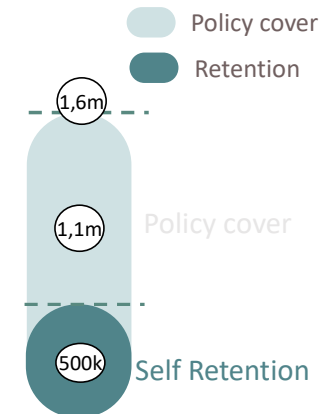
### WHAT WE HAVE DESIGNED?

Indemnity based flood event cover for municipalities. It covers the losses of all insured assets after a severe single flood event via a claims pay-out

### WHAT IS INCLUDED IN A PAYOUT?

Claims pay-out includes replacement costs of insured premises, unsecured inventories and 20 % buffer for emergency relief measures

Return Period	Estimated losses	What is covered
2	0,1m	- (losses are below the self-retention level)
5	0,3m	- (losses are below the self-retention level)
10	0,5m	Cover kicks in when losses > 500k
25	0,7m	192.765
50	0,9m	432.105
100	1,2m	738.624
200	1,6m	1.100.000



# Thank You!

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**#EO4Impact**



Matthias is leading the unit @giz dealing with *Disaster Risk Finance and Insurance*. He has sixteen years expertise in strategic planning and implementation of various projects (Finance and –insurance; climate and disaster risk management/ -insurance; private sector development) with the German International Cooperation (GIZ).

Over the last 10 years Matthias was responsible for building up the insurance portfolio at GIZ as well as innovate products and business opportunities across various technical departments within GIZ.

This was prepared by a university degree in business administration with a focus on international marketing and change management at NUS Singapore and RWTH Aachen. Matthias and his family live close to the mountains in Bavaria's capital Munich



**Matthias Range**

Head of Unit

Deutsche Gesellschaft für  
Internationale Zusammenarbeit(GIZ)

Job is a flood risk management consultant at HKV, a consultancy firm and knowledge entrepreneur in water and safety founded in 1995.

He has been working on flood related projects for 22 years. Since 2003 he is mainly working on flood risk management studies in international settings. Many of Job his projects are carried out in data scarce regions. That means the use of remotely sensed open geo data, crowd sourcing and applied physics are essential in providing flood related services.

Job and his colleagues at HKV develop flood hazard, damage and risk models, but also operational flood early warning systems and water information systems.

HKV developed a flood risk model of Accra, which was vital input to a WB loan targeting flood mitigation measures in Accra region and later on used to pilot insurance products in a data scarce environment.



**Job Udo**  
Senior Consultant Flood Risk  
Management



Dominik is a Senior Cat & Business Development Analyst at Allianz Re, the global reinsurance arm of Allianz SE. For the past 14 years at Allianz Re, he has worked in the fields of Nat Cat Management, Business Development, and Data Management, addressing climate change both from a risk perspective and as an opportunity to grow the business. He supported various departments within Allianz Re in the development of new data driven insurance products.

With passion and expertise (Dominik is a meteorologist by profession), he initiated and led numerous discussion on how Allianz as an organization could leverage climate change risk data to help their clients build resilience against the effects of climate change and to ensure the sustainable of Allianz' business model. Together with partners like GIZ and HKV consulting, he has shaped the understanding of how innovative & data driven approaches can help to close the insurance protection gap in Accra, Ghana and other regions of the global South.



**Dominik Aulehner**  
Senior Cat & Business  
Development Analyst