

# THE RELATIONSHIP BETWEEN THE RESIDENTS AND THE CANAL AND HOW THEY CREATIVELY ADAPT THEIR ENVIRONMENT DURING DISASTER.

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This project forms part of ongoing research collaboration between the Global Urban Research Unit at Newcastle University with supervisor Dr. Peter Kellett, and a team led by Dr Rittirong Chutapruittikorn at Bangkok University. The project involved KMITL University in Bangkok.

## INTRODUCTION



This group research project focuses on the study of the risks and vulnerabilities faced by informal settlements in Bangkok. The serious flooding of Bangkok in 2011 was used as a way for us to measure and understand community resilience.

In order to carry out this research we spent 8 weeks carrying out fieldwork in two case study communities in Bangkok, Thailand. As Yin states the need for case studies grows from the desire to understand complex social phenomena (1989 p.14). The two communities we selected were Khlong Bua Kwan, an urban canal-side settlement within the city's flood defences and Khlong Bung Pai, a rural canal-side settlement just outside of the city's flood defences.

*"We humans have an amazing ability to innovate. Nowhere is this more apparent than in the world's diverse range of handmade or vernacular buildings." (Reid, 2007 p.6)*

### KHLONG BUNG PAI



### KHLONG BUA KWAN



My individual research topic within the group was to study the relationship between the canal and the adjacent houses, in particular how the residents adapted their houses during the floods.

## RESEARCH AIMS:

1. Investigate ways that low income canal-side residents use their creativity, experience and knowledge to cope with hazards such as flooding
2. Learn how residents adapted their environment and livelihood in response to extreme 2011 flooding.

## METHODS

Qualitative research was our primary method. We collected our data through spending time in the field and building relationships with the residents. Throughout our fieldwork we encountered issues of communication and the language barrier. This became an unexpected opportunity to be creative with our methods and use the skills we have developed as architecture students, which are atypical of the social science researcher. As well as the traditional verbal interview and focus groups we developed methods of communication which involved visual cues and drawings which meant we could communicate directly with the residents rather than indirectly through an interpreter.

Focus groups



Drawings by the residents



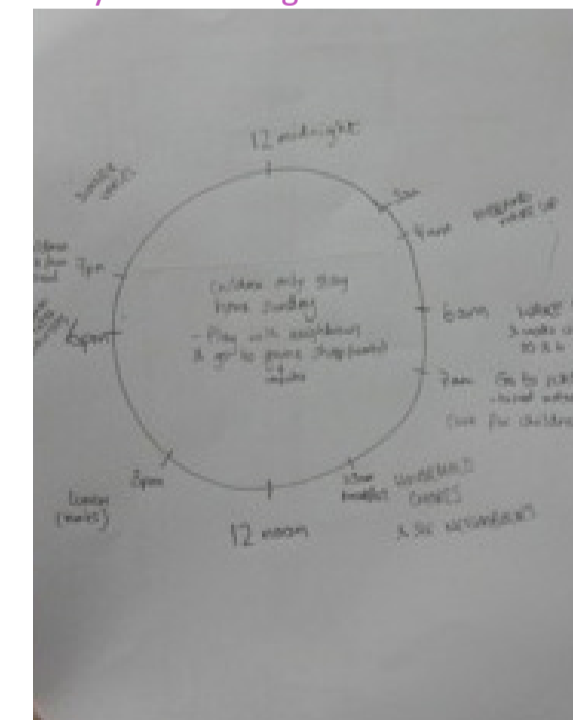
Photo elicitation



Detailed drawings



Daily routine diagrams



Measured Drawing



## MY PARTICULAR RESEARCH AIMS WERE ACHIEVED THROUGH:

1. Detailed measured drawing- this enabled thorough observation and collection of data regarding the physical elements of the community.
2. Drawings by the residents- understanding their perceptions of space.
3. Daily routine diagrams- to understand the effects of flooding on daily domestic life.
4. Photo elicitation- simple visual communication, which can involve all ages.
5. Interviews in the home- the house and its elements became prompts for further conversation. Learning key words in Thai and gesturing was effective whilst interviewing in the context of the home.

## RESULTS

As a group we were very conscious of during our time in the communities was how we could give something back. To show our appreciation of their involvement and cooperation we created posters for each community documenting our 'results' and what we had learnt from them. This was an opportunity to verify our findings and for additional feedback. The posters were made translating our results into graphics, again to break through the language barrier. This was particularly relevant to my own research aims as the posters catalogued the physical adaptations made to their homes. This enabled discussion and encouraging the sharing of resources between communities.

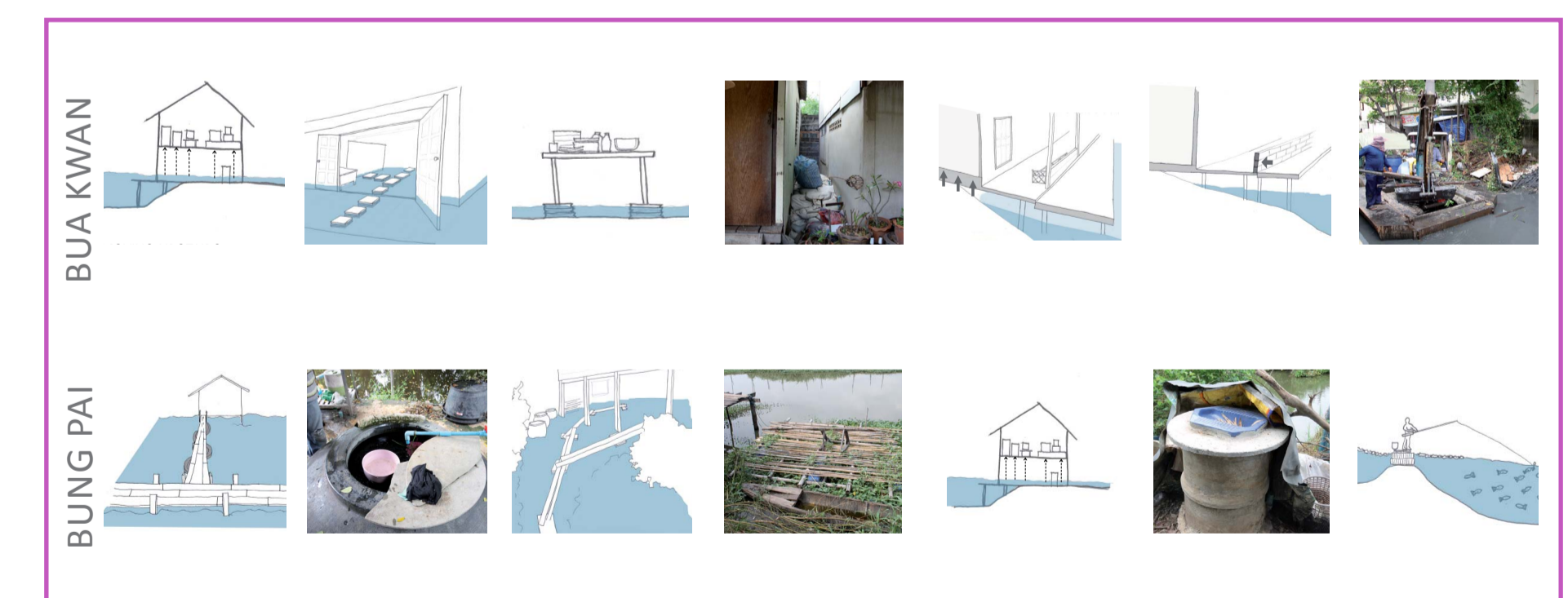
## PRESENTING OUR RESULTS



## CONCLUSION

This research has enabled us to gain a better understanding of the vulnerabilities faced by these informal settlements on a day-to-day basis as well as during times of crisis and disaster. Together as a group we have learnt that the nature of community resilience operates on three levels; the individual, collective and external. My focus on the relationship between the canal and the home taught me about resilience on an individual scale. Through the various verbal and visual methods I learnt how they use their creativity to physically adapt their homes (such as raised walkways) to reduce their vulnerability during times of hardship.

*"Cultures that are prone to frequent recurrent disasters have, in some cases, developed strategies to cope with them or have devised buildings that are resistant to their impact" (Oliver, 2010 p.149)*



## CATALOGUE OF ADAPTATIONS

Studying their vulnerabilities, we learnt that even without disaster the communities' informal status means they are constantly at risk. An implication of our presence as researchers in these previously unstudied communities can assist in raising their profiles, thereby increasing their chance of gaining formal status.

## REFERENCES

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 Yin, R. K.(1989) *Case study research: design and methods*. London: Sage Publications.