

Understanding, assessing and managing flood risk in Vietnam: a review of the literature

Water Security
and Climate Change
Conference

—
Hanoi, 2021

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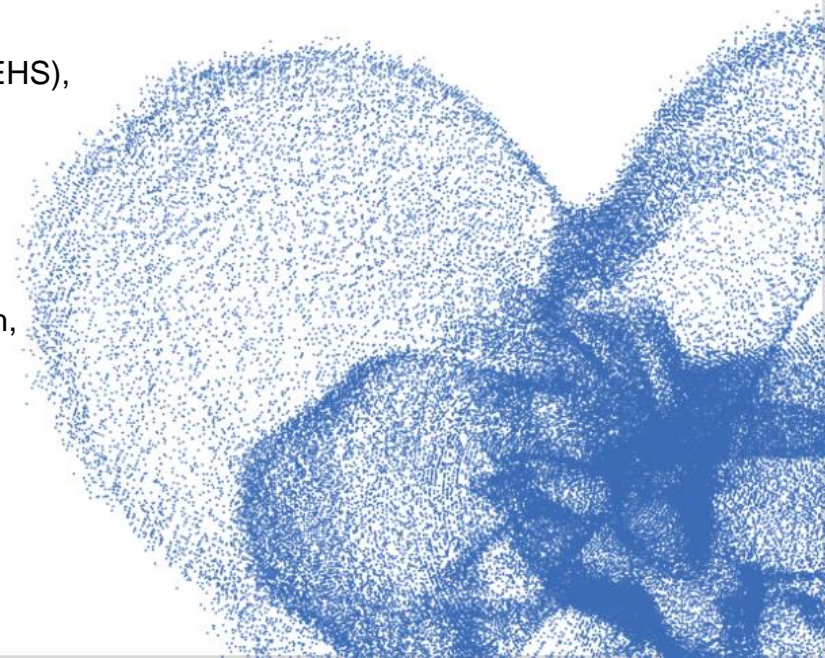
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PROBLEM STATEMENT

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- A large proportion of Vietnam's **population and assets** located in **low-lying coastal zones** → exposure to multiple hazards
- **Increase in precipitation and heavy rainfall events** due to climate change → more intense **flooding**
- Information and data on the **drivers, spatial hotspots** and **dynamics of present-day & future flood risk** as well as on **potential solutions** for flood risk reduction, risk transfer and adaptation remains insufficient
- Existing solutions & efforts focus mostly on **structural approaches**



Flooding in Hue in 10/2020 (Photo credit: FloodAdapt consortium)

COPING AND ADAPTATION MEASURES TO FLOOD



Slide 1

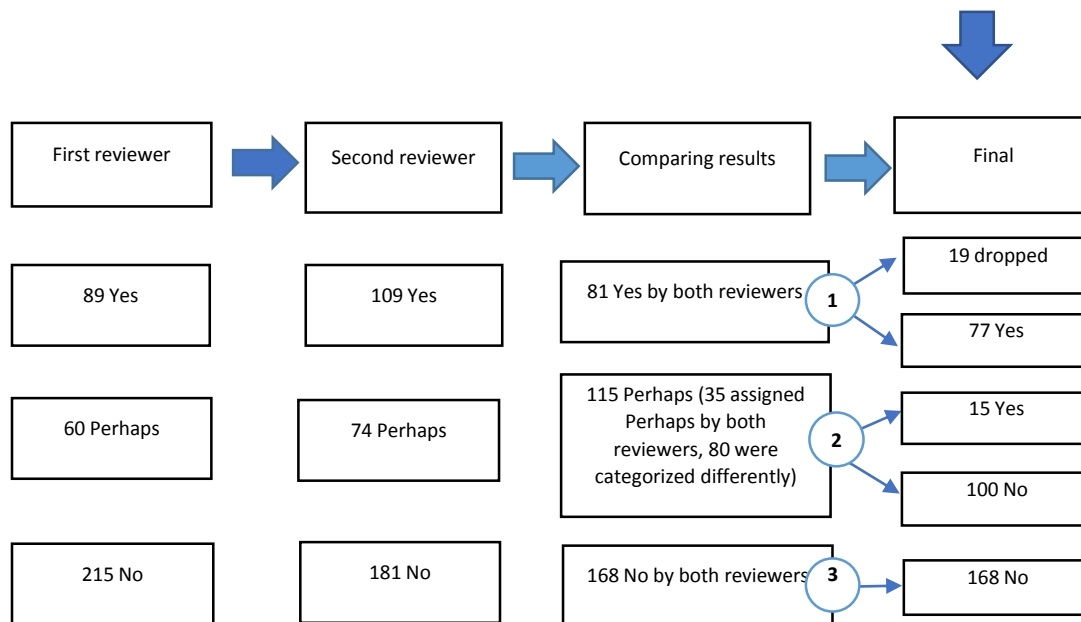
METHODS

Search on Web of Science (WOS)

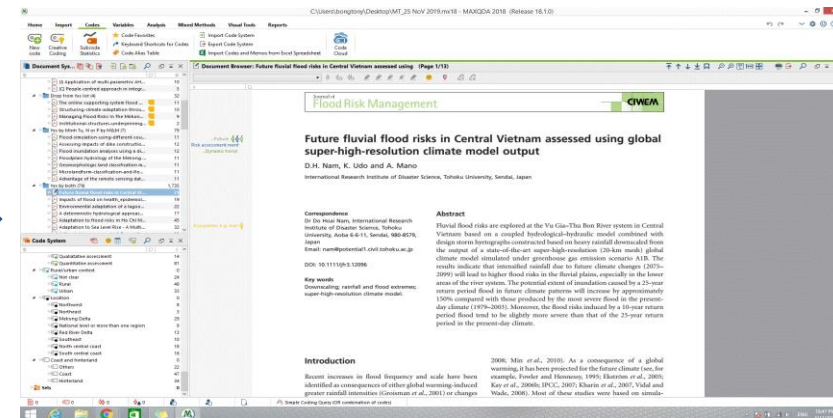
“TS = (flood Vietnam) AND TS = (risk OR vulnerab* OR resil* OR suscept* OR sensitiv* OR expos* OR cop* OR adapt*)”

Search on SCOPUS

“flood Vietnam AND (risk OR vulnerab* OR resil* OR suscept* OR sensitiv* OR expos* OR cop* OR adapt*)”

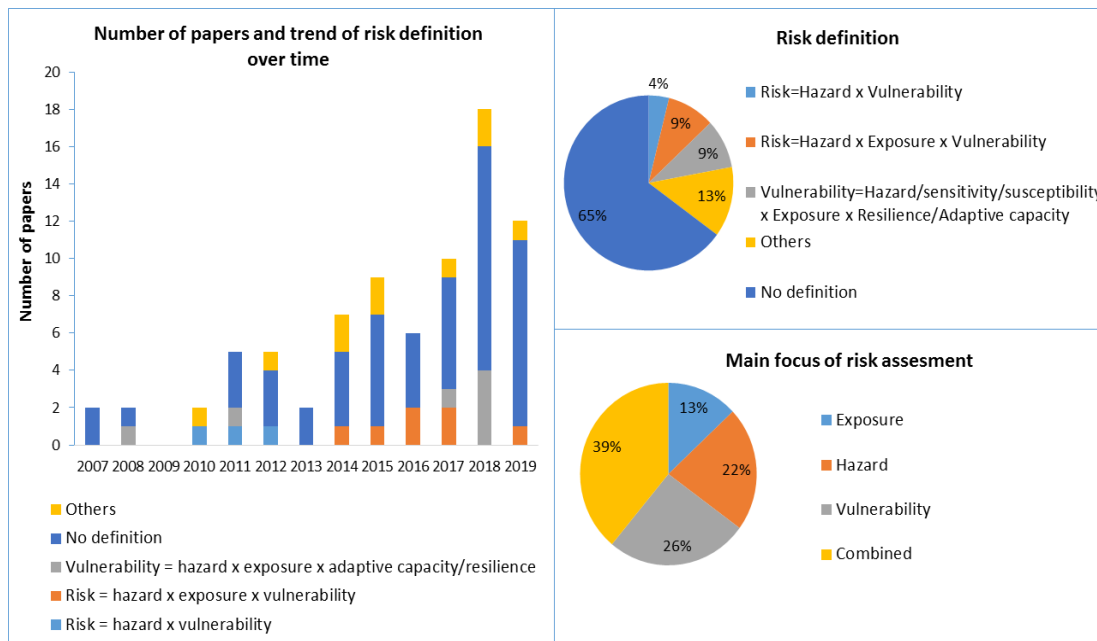


Abstract screening

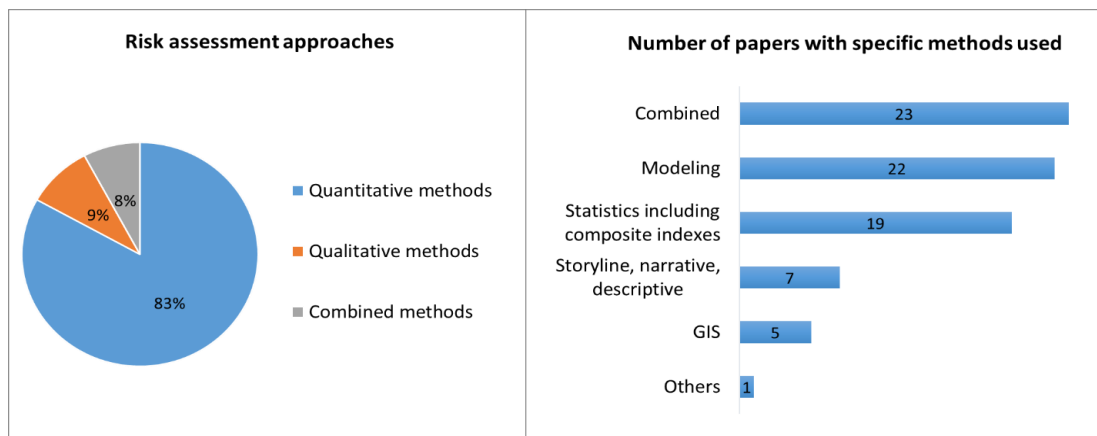


Analysis using MAXQDA

RESULTS

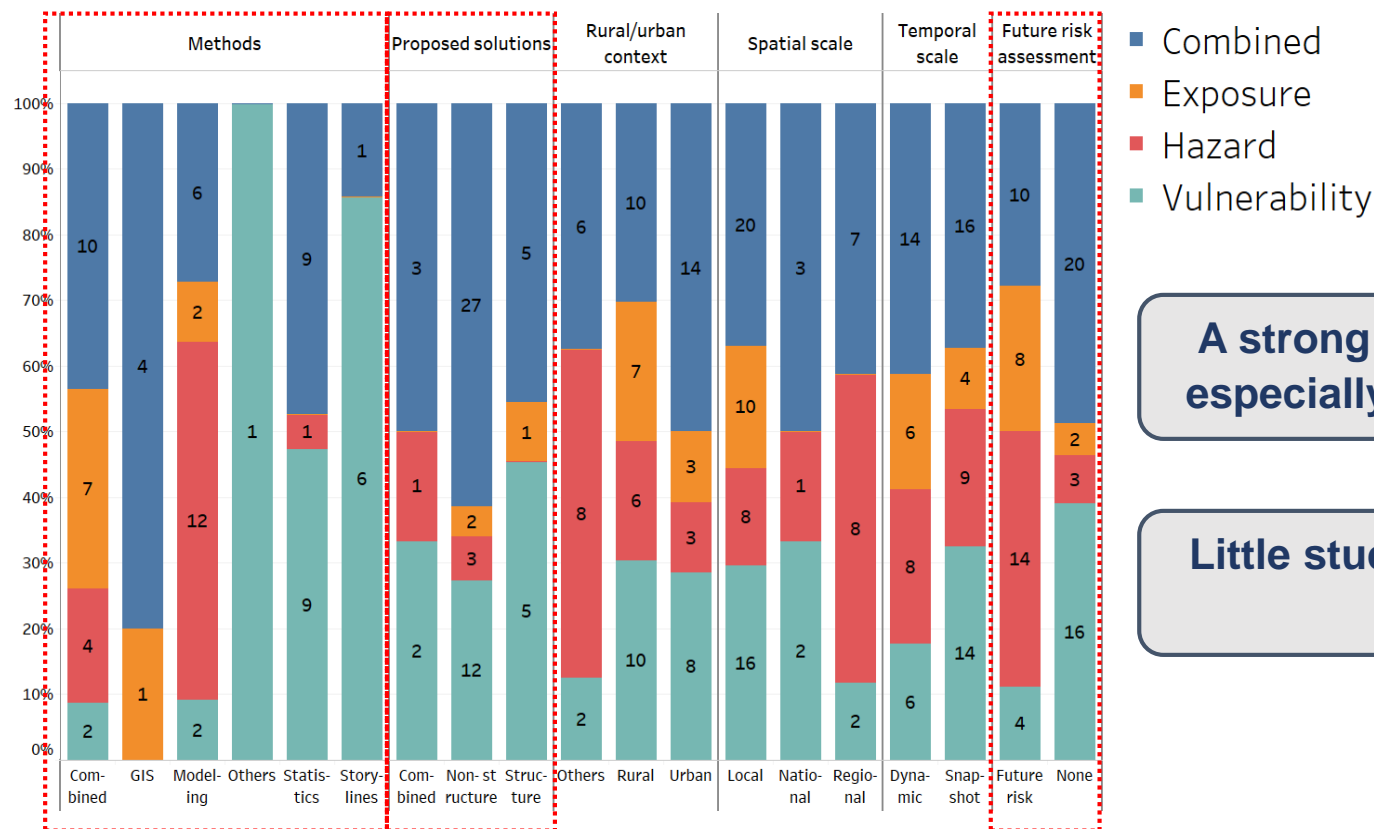


65% of the reviewed papers did not provide a risk definition.



Assessments had a tendency to prioritize physical and environmental over social, economic or governance-related drivers of risk.

RESULTS



A strong focus on modeling and GIS, especially for hazard-focused studies.

Little studies have engaged with local stakeholders.

Future-oriented assessments tend to focus on hazard and exposure trends, while vulnerability scenarios are often lacking.

Ecosystem-based adaptation and flood risk insurance were rarely considered.

C O N C L U S I O N S

- A **conceptualization** of flood risk could influence the choices of the assessment approach and outcomes → Incorporation of **hazard, exposure and vulnerability**-related elements.
- Enhance the exploration of **social, economic and political or governance-related drivers** of flood risk.
- Acknowledge **dynamic changes** among **all risk elements** in **future-oriented risk assessments** to narrow the existing gaps of future risk assessments which are currently strongly **hazard-focused**.
- Combining **different methods** and engaging **local stakeholders** in the assessments and developments of solutions.
- **Ecosystem-based solutions** to address the underlying drivers of flood risks

THANK YOU VERY MUCH!

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FLOOD ADAPT

