

LIRLAP

Linking disaster risk governance and land-use planning: the case of informal settlements in hazard prone areas in the Philippines



Aim of the project

LIRLAP will develop sustainable and socially acceptable solutions to the problem of informal settler families living in endangered areas. LIRLAP aims at tackling the severe problem of strategic risk reduction under conditions of urban poverty and informal urban development. It aims at developing and testing knowledge-based solutions for mainstreaming risk reduction measures (upgrading and retreat) in settlements with high disaster risk and the ineffectiveness of formal planning mechanisms. Moreover, it wants to strengthen the capacity of local and regional actors to properly address these planning problems.

WP 1: Risk trends and resettlement options with urban growth

WP1 aims to analyse and assess the influences of urban growth and socio-economic development on the risk changes of informal settlements in Metro-Manila. For this purpose, the urban growth model SLEUTH is refined to simulate future development of informal settlements and associated risk trends in several urbanization and socio-economic scenarios. Results and new methodical developments are also prepared for the training and teaching content of WP 5. In 2022, we have already prepared a draft of 3 national scenarios based on the Shared-Socio-Economic Pathways (SSP), extended the SLEUTH model by simulating urban structures, and developed a framework for the generation time-series data of the urban morphology in Metro Manila.

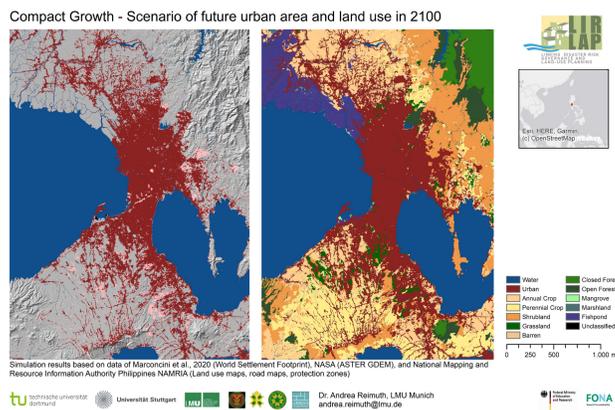


Figure 1: Exemplary simulation results of projected future urban growth for Metro Manila and its periurban regions.

Further planned activities for 2022 are:

- The implementation of the urban morphology component in the model SLEUTH
- The downscaling of the national socioeconomic narratives to a regional scale
- The simulation of future urbanization of Metro Manila and periurban areas
- stakeholder workshop in Manila in May and September to validate the scenarios of future socio-economic developments
- Visit the partners in Hanoi and Bangkok in September

By end of 2022, we will simulate several urban growth scenarios of Metro Manila based on the regional narratives of the future socioeconomic development.

WP 2: Resilient Upgrading

WP2 deals with on-site resilience upgrading of informal settlements in high-risk urban areas. It aims at enhancing residents' livelihood, community coping capacity and developing upgrading activities with the community. It follows a community-based approach, while being counterbalanced with planning interventions. Results of WP2 provides a first-hand up-to-date input for WP5 training and the PhD programme. In March 2022, we conducted 6 upgrading sites analysis including establishing contacts to communities, NGOs, and Local Government Units.



Figure 2: Impression from site visit, LIBIS Community (@Wolfgang Scholz)

In 2022, the planned activities are to be:

- Two on-site Focus Group Discussions (FGDs) on each upgrading site in May
- 30 household survey per site/community in June
- Identification of one suitable focal site as pilot upgrading site
- Multi-stakeholder workshop in September to validate field work findings
- Visit of potential sites in Hanoi and Bangkok in September

By end of 2022, we will prepare a resilience upgrading knowledge transfer to Vietnam and Thailand with all LIRLAP project partners.

WP3: Resilient retreat

WP3 analyses different resettlement approaches and their effects and investigates whether the planned relocation (retreat) can improve the resiliency of the people. An index-based evaluation and monitoring framework has been developed to reveal the cause and effects of the location, the participation processes, financing schemes and housing designs. Aim is to develop a model-retreat project which reflects the best resilience and likewise cost benefit prospect.



Figure 3: Discussion with local stakeholders in a resettlement scheme (@Hannes Lauer)

Current activities:

- Site visits with transect walks and discussions with local associations in 10 resettlement sites followed by a large-scale household survey
- Development of a Resilient Retreat Index to monitor resettlement activities and estimates on how resettlement contributed to or interrupted resilience building.
- Workshop on validating the household survey and index in September 2022
- Knowledge transfer to and from Vietnam and Thailand in 2023
- Pilot site development

WP4: Mainstreaming upgrading and retreat strategies

WP4 aims to develop and formalize a coherent conceptual framework for the mainstreaming of upgrading and resettlement strategies. It will include methodology and practical mechanisms to support decision making, focussing on informal settlements, resettlement and upgrading. It will help actors to identify opportunities and limitations across sectors, scales and their different planning horizons. Cross-sectoral workshops will facilitate informal institutional engagement between sectors in land-use planning, disaster-risk management, and others as housing and social assistance.



Figure 4: multi-storey settlement project (@Hannes Lauer)

We are currently preparing a draft mainly addressing:

- Identification of gaps between knowledge and implementation
 - Contribution to policy making in a regional context
 - Accommodate informality as a concept
 - Define stakeholders serving as entry points
- By end of 2022, we will have a conceptual framework and including a transfer to Bangkok and Hanoi.

WP5: Capacity building

Resilient informal upgrading and retreat will only be successful and sustainable, if accompanied by capacity building of stakeholders at the local and national levels as well as in the academia and if results will be broadly disseminated and utilized. Therefore first training courses for key stakeholders involved in disaster risk management and urban governance has been successfully conducted in 2022. In 2022 and 2023 more training courses will be offered. As second part, a Dual PhD between TUDO and SURP on topics of urban planning and resilience and disaster risk reduction and management with regular PhD workshops is under preparation with the last steps of approval from academic bodies. Students at the PhD level shall be intensively involved in all research activities of the various WPs. LMU and Stuttgart Universities will be involved in joint supervision as well.



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