



Integrated Urban Planning for Natural Hazard Mitigation: Practical and Theoretical Issues

March, Alan¹, Nogueira de Moraes, Leonardo¹, Riddell, Graeme², Stanley, Janet ¹, Van Delden, Hedwig^{2,3}, Beilin, Ruth¹, Dovers, Stephen⁴, Maier, Holger²

¹The University of Melbourne, VIC, ²The University of Adelaide, SA, ³Research Institute for Knowledge Systems - RIKS, The Netherlands, ⁴Australian National University, ACT

Urban Planning – UP systems have considerable potential to modify the impacts of natural hazards upon the built environment, and to contribute to resilience processes and outcomes. However, the full integration of planning systems with emergency management is still far from reaching its potential.

CHALLENGES TO THE INTEGRATION OF URBAN PLANNING WITH NATURAL HAZARD MITIGATION

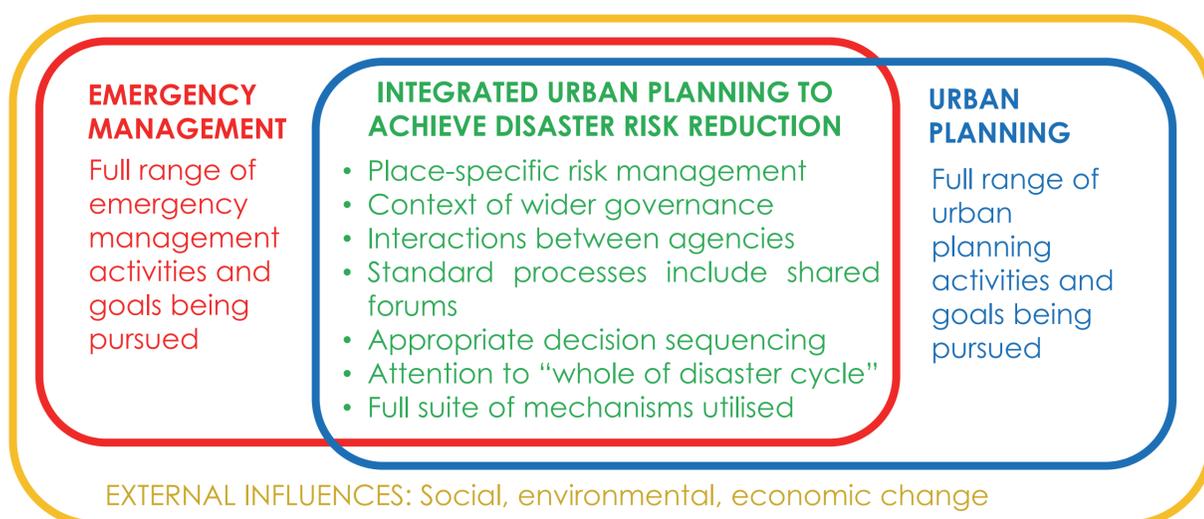
- Settlements portray pre-existing patterns of investment, tenure and human characteristics that slow down processes of change, imposing the need for concerted efforts for them to be effective;
- New types of emergent and complex risks such as heatwaves and heat islands, infrastructure “brittleness” and differences of service capacity across cities and regions, and response times;
- Multi stakeholders driven by different outcomes in the individual-collective spectrum (public managed planning systems trying to influence private patterns of built and natural environments reshaping);
- Political, legal, bureaucratic, physical and bio-physical constraints limiting the reach of UP systems and institutions in their pursuit of multiple goals, not always aligned with risk management processes;
- Imperfect understanding of Planning by Emergency Management policy makers and practitioners and vice-versa.

ELEMENTS OF AN APPROACH TO INTEGRATION

1. Intra-organisational / agency integration, horizontally and vertically;
2. Inter-organisational / agency integration, horizontally and vertically;
3. comprehensive coverage of all hazards;
4. full use of all planning treatment options;
5. integration of a wide range of other relevant parties;
6. procedural integration;
7. integration across PRR;
8. goals, objectives and terminology integration;
9. treatments integration;
10. acknowledgement of local, cultural, social, economic and ecological matters; and
11. management of legacy and emergent risks in the built environment

KEY ISSUES AND DIRECTIONS

- Match UP and risk assessment decision-making processes;
- Lack of forums at appropriate levels to provide opportunities to consider risks associated with a range of strategic directions;
- Use a wider range of planning tools.
- Ensure key terms are common across NHM and Urban Planning.
- Major, extraordinary, fast-tracked or significant projects are usually removed from UP and risk treatments.
- Project funding allocation not being coordinated to integrate urban planning and treatments.
- Long-term thinking about risks, the environment and demographic changes not being included in key forward planning processes.
- Lack of overarching approaches in UP that focus on risk assessment, strategic decisions and treatments.
- Uncertainty of the scope of capability and the role of local authorities in risk management.
- Equity and diverse levels of capability in risk profiles.
- Exclusion of transport and infrastructure from consideration.
- Increased political and ministerial executive control of UP agencies.
- Some hazards and risks-scapes paid less heed: e.g. heatwave, landslip.
- Incrementally denser settlements are not accounted for.



For further information, please contact A/Prof Alan March (project leader): alanpm@unimelb.edu.au.