



Floods in Queensland

- Key Topics:
- mitigation [2]
  - planning [3]
  - risk management [4]


Urban planning for natural hazard mitigation [5]  
This project investigated the limits and potentials of integrated urban planning for natural hazard mitigation in Australia, and the ways in which key planning processes for risk-based decision making in the built environment can be improved. In doing so, the research team identified many gaps in the ways urban planning and natural hazard risk management are integrated together. Learnings from this project were captured in a set of scalable and adaptable diagnostic tools that are part of critical frameworks for best practice in integrating urban planning and natural hazard mitigation in Australia. These diagnostic tools allow assessment of integration and risk management across urban planning and emergency management systems and processes.

Project: detail Notabs


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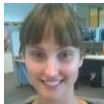


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## Description

Urban planning systems have considerable potential to modify the impacts of natural hazards upon the built environment, humans and associated systems. With the increased frequency of natural hazards due to climate change and increased exposure to hazards due to population growth pressures, especially in the urban-rural interface, there are also increased consequences for human settlements and likely exacerbation of the challenges associated with natural hazard impact.

In this context, this project sought to understand the limits and potentials of integrated urban planning for natural hazard mitigation in Australia, and the ways in which key planning processes for risk-based decision-making in the built environment can be improved. By doing so, it identified many gaps in the ways we currently seek to integrate urban planning and natural hazard risk management.

Learnings were captured in a set of scalable and adaptable diagnostic tools that are part of critical frameworks for best practice in integrating urban planning and natural hazard mitigation in Australia. These diagnostic tools allow assessment of integration and risk management across urban planning and emergency management systems and processes. This set of tools is the final product for this research project and the utilisation output delivered to end-users. This output represents a comprehensive understanding of the potentials and limits of urban planning systems when it comes to disaster risk reduction. It allows for a range of new ways forward to fully utilise and integrate urban planning with natural hazard mitigation actions and outcomes.

[Read the final report here.](#) [54]

In the video below, project leader Prof Alan March discusses how urban populations can protect themselves from natural hazards.

## Related News



23 FEB 2021

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Urban design for future fire risk in Chile  
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New natural hazards science for Australia  
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[78]





22 MAR 2017

New science set to dazzle

[79]

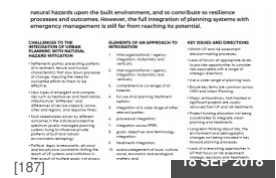
Publications

| Year | Type             | Citation  |
|------|------------------|---|
| 2021 | Journal Article  | Gonzalez-Mathiesen, C. [80], Ruane, S. [81] & March, A. [6] <a href="#">Integrating wildfire risk management and spatial planning – A historical review of two Australian planning systems</a> [82]. <i>International Journal of Disaster Resilience</i> 14(1), 1-12 (2021). Google Scholar [83] BibTeX [84] EndNote XML [85] |
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| 2020 | Book Chapter     | March, A. [6], de Moraes, L. Nogueira [14] & Stanley, J. [13] <i>Natural Hazards and Disaster Justice: Challenges for Australia and Its Neighbours</i> 93-115 (Palgrave Macmillan, 2020). doi:https://doi.org/10.1007/978-1-349-15111-1_5   |
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| 2019 | Conference Paper | Riddell, G. [8] <i>et al.</i> <a href="#">Future risk framework: understanding tomorrow's risk and what we can do to reduce it</a> [125]. <i>AFAC19 powered by INTERSCHUTZ - Bushfire and Natural Hazards CRC Research Conference</i> (2019). Google Scholar [126] BibTeX [127] EndNote XML [128]                             |
| 2019 | Conference Paper | Pikusa, E. [31] <a href="#">The mitigation exercise: a long term mitigation planning process, with a coastal flooding case study in Adelaide</a> [130]. <i>AFAC19 powered by INTERSCHUTZ - Bushfire and Natural Hazards CRC Research Conference</i> (2019). Google Scholar [131] BibTeX [132] EndNote XML [133]               |
| 2019 | Journal Article  | Killin, E. [134] & March, A. [6] <a href="#">Path dependency of the development contributions system</a> [135]. <i>Planning News</i> 45, (2019). Google Scholar [136] BibTeX [137] EndNote XML [138]  |
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Presentations & Resources

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| 18 Apr 2017 | Integrated Urban Planning for Natural Hazard Mitigation [157]                          | 467.89 KB | urban planning [3], risk management [4]                            |
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| 07 Jul 2017 | Understanding the value and challenges of risk mitigation [161]                        | 4.17 MB   | mitigation [2], resilience [164]                                   |
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| 06 Apr 2018 | Urban planning for natural hazard mitigation - project overview [170]                  | 0 bytes   | urban planning [3], management [172], mitigation [2], planning [3] |
| 17 Apr 2018 | Integrated urban planning for natural hazard mitigation [173]                          | 2.27 MB   | multi-hazard [175], planning [3]                                   |
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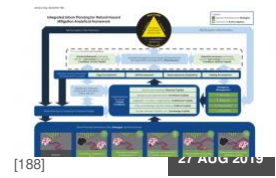
Posters



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

MITIGATION [2], PLANNING [3]

Urban Planning – UP systems have considerable potential to modify the impacts of natural hazards upon the...



[188] Integrated Urban Planning for Natural Hazard Mitigation: A System-Wide View

MITIGATION [2], MULTI-HAZARD [175]

Urban Planning systems have considerable potential: to modify the impacts of natural hazards upon the built...



[189] Urban Form and Disaster Risk Reduction

MITIGATION [2], PLANNING [3]

Key findings: Appropriate management of disaster risk in a dynamic urban context requires performance...



[190] Victorian urban planning for disaster risk reduction

MITIGATION [2], MULTI-HAZARD [175]

Key findings: Victorian urban planning disaster risk reduction controls can be enhanced by a cross-hazard...

Linked Projects

Flood risk reduction in a dynamic urban context exploring the urban-water-resilience nexus

[191]  
ECONOMICS AND STRATEGIC DECISIONS [192]  
Saimum Kabir  
University of Melbourne [7]



[7]

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