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Strategic Thinking to Enhance Critical Transport Infrastructure and Build Resilience

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Abstract : Gaps in strategic thinking and planning lead to critical transport infrastructure resilience. These gaps in strategic transport and land use development planning have an impact on communities and cities. Natural and man-induced disasters can be catastrophic to communities. After a disaster, many types of critical infrastructure, including transport infrastructure gets un-usable or gets damaged. This paper examines strategic thinking behind the resilience and protection of Critical Transport Infrastructure (CI) within transport networks by investigating the impact of disasters such as bushfires, hurricanes and earthquakes. A detailed analysis of three case studies have been conducted to identify the gaps in strategic transport planning and strategic decision making processes required to mitigate the impacts of disasters. Case studies will be analysed to identify existing gaps in road design, transport planning and decision making. This paper examines the effect of road designing, transport corridors and decision making during transport planning stages and how it impacts transport infrastructure as well as community resilience. A set of recommendations to overcome the shortcomings of existing strategic planning and designing process are presented. This research paper reviews transport infrastructure planning issues and presents the common approach suitable for future strategic thinking and planning which could be adopted in practices.

Keywords : community resilience, decision making , infrastructure resilience, strategic transport planning, transport infrastructure
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