

まちづくりにおける防災評価・対策技術の開発

Development of Assessment and Countermeasure Technologies for Disaster Prevention in Town Planning

兵庫県南部地震においては、街区内部の火災による被害が極めて大きく、市街地火災に対する安全性向上対策の重要性が、あらためて指摘された。また、その後の市街地復興のまちづくりでは、平常時からの住民参加に基づくまちづくり・防災対策の必要性が指摘されており、これらの活動を支援するための技術の開発が強く求められている。

そこで、本プロジェクトにおいては、従来の延焼遮断帯・避難地・避難路対策といった、都市の骨格を形成する都市計画的防災対策に加えて、街路、都市河川、公園・緑地、空き地等、地区内の施設などや、耐火性能を有する建築物等が市街地火災に対してどのような延焼抑止効果を有するのかを明らかにするとともに、地区防災性能の評価手法を整備し、さらに地区防災性能向上のための効果的対策技術を開発する。また、住民参加を含めた防災まちづくりの立場から、地区レベルの防災性能を向上させる推進方策について研究・開発を行う。

Fires caused extensive damages inside the cities hit by the Hyogo-ken Nanbu Earthquake, inciting a renewed awareness of the importance of measures necessary to ensure safety in the event of urban fires. In the city planning for the reconstruction of the affected cities and neighborhoods, the importance of concerted planning and disaster prevention measures based upon daily participation by local residents was indicated. The development of technology to support such activities is strongly recommended.

This project is to develop urban planning disaster prevention measures, which constitute a city's civil emergency framework, such as fire-breaks, evacuation sites, and evacuation routes. In addition, it involves clarifying how effectively buildings with fire-resistant equipment and facilities in cities such as roads, rivers, parks, greenery, and open spaces work to stop the spread of fires. Along with those factors mentioned above, enhancement of assessment methods for disaster prevention functions in the area and effective countermeasures for improving them will be developed. The project is also devoted to the research and development of measures for promoting the enhancement of disaster prevention functions at the area level from the perspective of disaster prevention town planning with participation by local residents.

地区の防災対策技術の開発 Development of technology for area disaster prevention measures

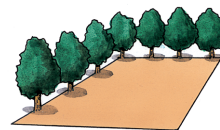
緑化による延焼抑止効果の解明
Clarification of the effectiveness of greenery in stopping the spread of fires



道路の延焼抑止効果と災害時における役割の解明
Clarification of the effectiveness of roads in stopping the spread of fires and their roles during disasters



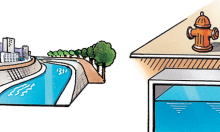
空き地等の延焼抑止効果の解明と配置手法に関する技術開発
Clarification of the effectiveness of open spaces in stopping the spread of fires and the development of technology concerning city planning



建築物の耐火性能別にみた建物配置等の技術開発
Development of technology for building arrangement based on the fire resistance of specific buildings



都市河川等を消火・緊急生活用水として利用するための技術開発
Development of technology for using urban rivers in fire fighting and as fresh water during emergencies



防災要素の影響評価手法への反映

Incorporation into methods for assessing the impact of disaster prevention elements

計画支援技術・防災対策推進方策に反映

Incorporation into planning of support technology and disaster prevention measure promotion plans

地区の防災要素の影響評価手法の開発 Development of methods for assessing the impact of area disaster prevention elements

各種事業等の防災的効果評価
Assessment of the disaster prevention effectiveness of different types of projects



救出・救護に影響する要素の効果の分析
Analysis of the effectiveness of essential elements for rescue and relief efforts



市街地火災抑止に影響する要素の効果の分析
Analysis of the effectiveness of essential elements for fire prevention in cities

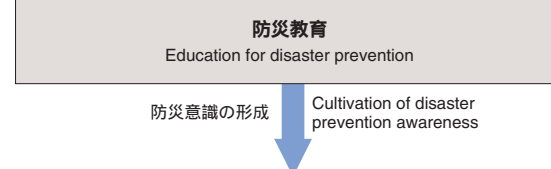
避難問題に影響する要素の効果の分析
Analysis of the effectiveness of essential elements for evacuation problems



計画支援技術・防災対策推進方策に反映

Incorporation into planning of support technology and disaster prevention measure promotion plans

計画支援技術・防災対策推進方策の開発 Development of planning support technology and disaster prevention measure promotion plans



住民参加まちづくり協議会等
Town planning meetings with participation by local residents



情報の提供
Provision of information

地区施設等の整備における防災投資効果
Effectiveness of disaster prevention investments in the creation of facilities in the area

技術の提供
Provision of technology

評価シミュレーションモデルの開発・活用 Development and application of assessment simulation models



防災性能評価手法
Assessment methods for disaster prevention functions



防災カタログ・防災カルテ作成技法
Techniques for compiling disaster prevention catalogs and records



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