6. 道路の整備状況による災害時の活動困難度を考慮した危険度

Risk in Light of Emergency Response Difficulty Based on the Status of the Roadway Network

地震により建物が倒壊したり火災が発生したりした時には、危険地域からの避難や消火・救助活動のしやすさ（困難さ）が、その後の被害の大きさに影響します。このような活動のしやすさ（困難さ）を、地域の道路網の稠密さや幅員が広い道路の多さなど、道路基盤の整備状況から評価した指標が「災害時活動困難度」です。

従来の建物倒壊危険度・火災危険度・総合危険度を、新たに災害時活動困難度を考慮して測定し直すことにより、災害時の活動しやすさを加味した地域の危険度を評価しています。

災害時活動困難度の測定方法

幅員6m以上の道路まで到達するのにかかる平均的な時間と、幅員4m以上の道路から容易にアクセスできない範囲が町丁目面積に占める割合を掛け合わせた値に基づき測定しました。

When buildings collapse or fires break out from an earthquake, how easy (or difficult) it is to evacuate from the stricken areas or to conduct firefighting and rescue activities will affect the scale of further damages. “Emergency response difficulty” is an index of the ease or difficulty of such operations based on assessments of the existing road infrastructure including the density of the road network and the number of wide roads.
By reassessing building collapse risk, fire risk, and combined risk by newly considering the difficulty of emergency response, community risk was assessed by taking into account the ease or difficulty of response in the event of a disaster.

災害時活動困難度の測定結果

災害時活動困難度は、全体的な傾向として多摩地域で高く、台東区や千代田区東部、中央区北部などの都心部で低くなっています。（下図参照）

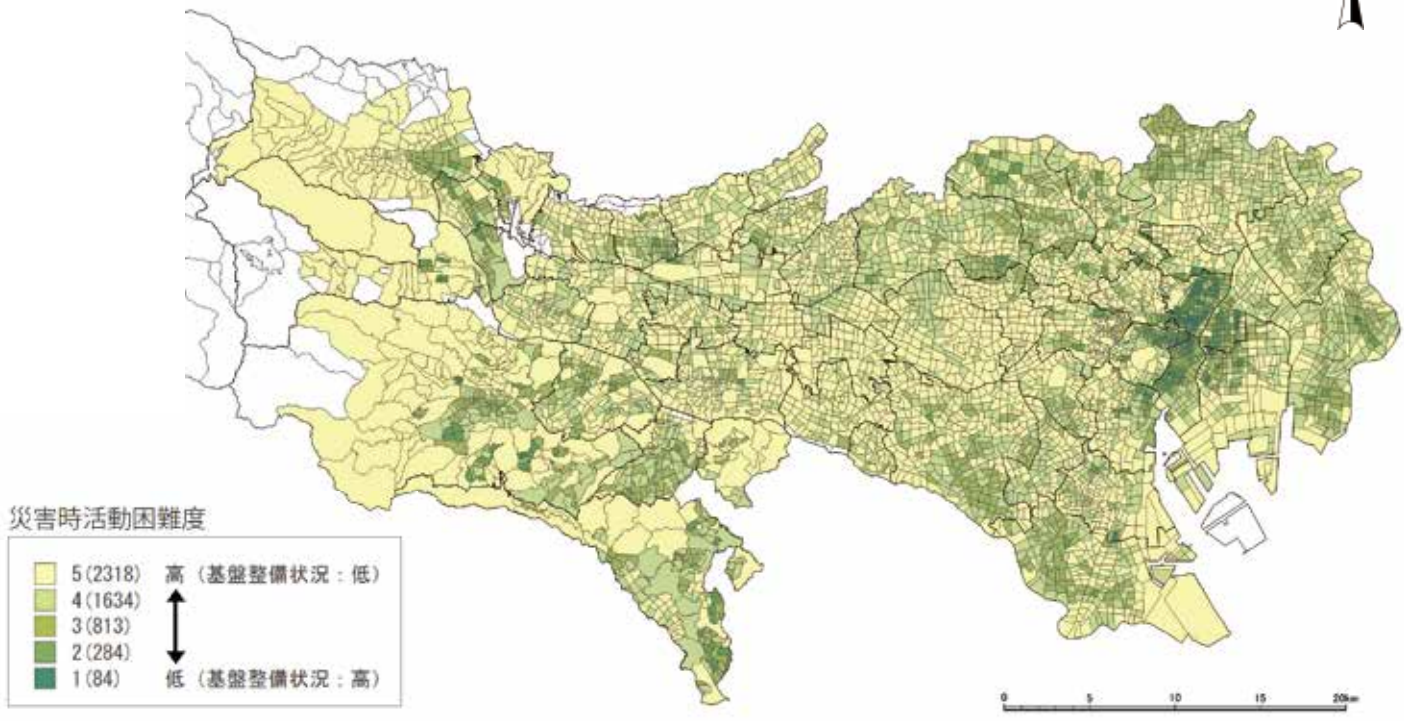
How Emergency Response Difficulty Is Assessed

The index for emergency response difficulty was based on a figure derived by multiplying the average time it takes to reach a road that is at least 6 meters wide by the percentage of the community’ s area that is unable to easily reach a road at least 4 meters wide.

Results of Emergency Response Difficulty Assessment

There was an overall tendency for the Tama area to have high emergency response difficulty and for Taito Ward, eastern Chiyoda Ward, northern Chuo Ward and other parts of central Tokyo to have low emergency response difficulty.

災害時活動困難度ランク図 Map of Emergency Response Difficulty Ratings



～災害時活動困難度を考慮した建物倒壊危険度と災害時活動困難度を考慮した火災危険度～

- Building Collapse Risk and Fire Risk in Light of Emergency Response Difficulty -

「災害時活動困難度を考慮した建物倒壊危険度」は、倒壊した建物からの避難や救助活動に関わる危険度です。
「災害時活動困難度を考慮した火災危険度」は、火災が発生した建物の消火や救助活動に関わる危険度です。

測定方法

町丁目ごとに、建物倒壊棟数又は全焼棟数を面積で割り、災害時活動困難度を掛け合わせた値として測定しました。

“Building collapse risk in light of emergency response difficulty” is risk associated with evacuation and rescue operations from collapsed buildings.
“Fire risk in light of emergency response difficulty” is risk associated with extinguishing fires and conducting rescue operations from buildings that have caught fire.

Assessment Method

The number of buildings that will collapse or be totally destroyed by fire in a community was divided by the community’ s area, and the resulting quotient was multiplied by the index of emergency response difficulty.

測定結果

災害時活動困難度を考慮した建物倒壊危険度・火災危険度は、木造建物が密集し、かつ道路基盤整備が進んでいない地域で高くなり、環状七号線沿いの下町地域から山の手地域にかけてドーナツ状に分布しています（18ページ参照）。

Assessment Results

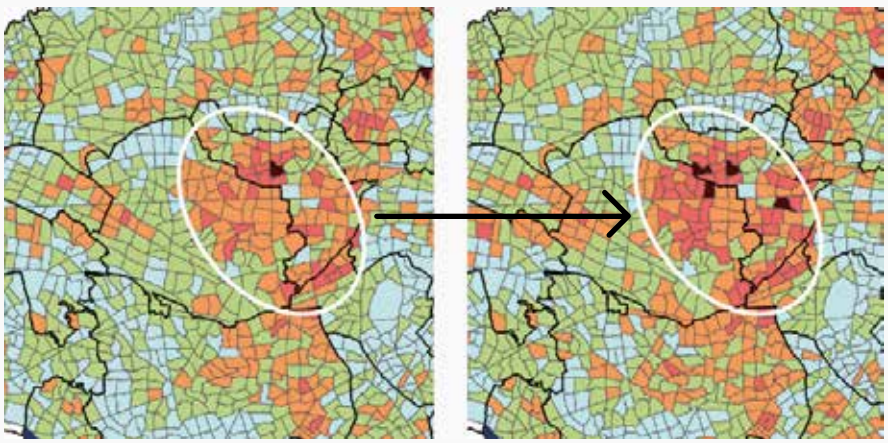
Building collapse risk and fire risk in light of emergency response difficulty were high in areas with a high concentration of close-set wooden houses and underdeveloped road infrastructure. These areas were distributed around Ring Road No. 7 from the Shitamachi to Yamanote areas. (see p.18)

Q. 災害時活動困難度を考慮すると、危険度はどのように変わりますか？

How does risk change when difficulty of emergency response is factored in?

A. 建物倒壊危険度や火災危険度では危険度ランクがあまり高くない地域でも、道路整備が進んでいない場合には、災害時に活動し難い（災害時活動困難度が大きい）ため、危険度ランクが高くなります。
具体的には、杉並区、中野区周辺などの火災危険度です。

Risk will increase for even those areas that do not rank that high in building collapse or fire risk if the road infrastructure is underdeveloped, as this will make emergency response difficult (high emergency response difficulty).
A concrete example is the increase in fire risk around Suginami and Nakano wards.

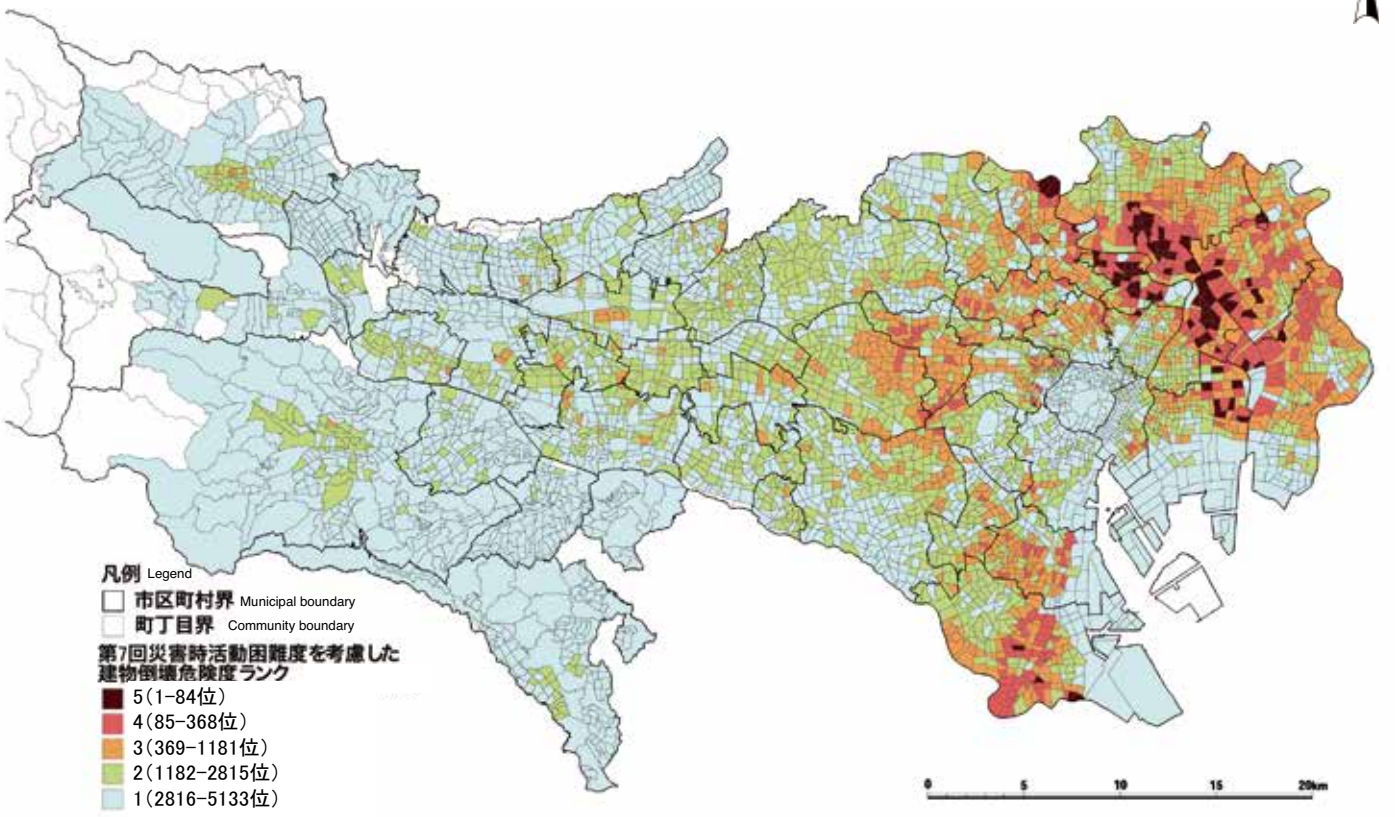


火災危険度ランクの分布
Distribution of communities by fire risk rating

災害時活動困難度を考慮した火災危険度ランクの分布
Distribution of communities by fire risk rating in light of emergency response difficulty

災害時活動困難度を考慮した建物倒壊危険度ランク図

Map of Structural Collapse Risk Ratings in Light of Emergency Response Difficulty



災害時活動困難度を考慮した火災危険度ランク図

Map of Fire Risk Ratings in Light of Emergency Response Difficulty