Opportunities for participatory data collection	Yes, with data available to Cities' departments
Additional information	
References	United Nations Office for Disaster Risk Reduction, *Disaster Resilience Scorecard for Cities – Preliminary Level Assessment,* May 2017 https://www.unisdr.org/campaign/resilientcities/toolkit/article/disaster-resilience-scorecard-for-cities

5.14 Disaster-risk informed development

Project Name: UNaLab (Grant Agreement no. 730052)

Author/s and affiliations: Maria Dubovik, Laura Wendling, Ville Rinta-Hiiro, Arto Laikari, Malin zu-Castell Rüdenhausen

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Disaster-risk informed development	**Natural and Climate Hazards**
Description and justification	Natural and climate hazards such as floods or earthquakes cannot be prevented. However, it is possible to anticipate the consequences and take preventive measures. Including disaster risk planning into national and/or municipal urban development plans enhances the resilience against natural hazards that reduces the economic losses and damages to property.
Definition	The extent to which disaster risk has been taken into account when planning national-level or municipal-level economic or urban development (0-2)
Strengths and weaknesses	+ Ensures robust action planning for urban disaster resilience - Requires prior risk assessment on national/municipal level
Measurement procedure and tool	The inclusion of disaster-risk informed urban development to local development plans can be assessed using the scale: 0 – No inclusion: Disaster risk has not been accounted in either national economic development plans, or in city-level urban planning; 1 – Partial inclusion: Present only in the active national development plan/strategy; 2 – Full inclusion: Accounted for in both the active national development plan/strategy and in city-level urban planning

	(e.g., through policies, directives, urban development plans or strategies).
Scale of measurement	Municipality; country
Data source	
Required data	Local risk assessment for natural and climate hazards; local development plans
Data input type	Semi-quantitative
Data collection frequency	Annually
Level of expertise required	Moderate
Synergies with other indicators	The indicator can be assessed in conjunction with *Disaster resilience* indicator. It is directly related to all indicators the *Natural and Climate Hazards* indicator group and encompasses them and their impacts for a holistic urban development.
Connection with SDGs	SDG 9 Industry, innovation and infrastructure, SDG 11 Sustainable cities and communities, SDG 13 Climate action
Opportunities for participatory data collection	No opportunities identified
Additional information	
References	Tyszka, T. and Zielonka, P. *Large risks with low probabilities: Perceptions and willingness to take preventive measures against flooding*. IWA Publishing, 2017, pp. 105-118.

5.15 Mean annual direct and indirect losses due to natural and climate hazards

Project Name: RECONECT (Grant Agreement no. 776866)

Author/s and affiliations: Karsten Arnbjerg-Nielsen[1]

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Mean annual direct and indirect losses due to natural and climate hazards	**Natural and Climate Hazards**
Description and justification	The losses due to natural and climate hazards can be calculated for any area. The calculation is usually based on models in order to account for natural variation of the hazards. The mean annual losses are often referred to as