10.21 Animal species potentially at risk

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Author/s and affiliations: Gerardo Caroppi[1,2], Carlo Gerundo[2], Francesco Pugliese[2], Maurizio Giugni[2], Marialuce Stanganelli[2], Farrokh Nadim[3], Amy Oen[3]

[1] *Aalto University, Department of Built Environment, Espoo, Finland (gerardo.caroppi@aalto.fi)*

[2] *University of Naples Federico II (UNINA), Department of Civil, Architectural and Environmental Engineering, Naples, Italy*

[3] *Norwegian Geotechnical Institute (NGI), Oslo, Norway*

Domestic and Wild Fauna at Risk	**Natural and Climate Hazards Biodiversity**
Description and justification	This indicator assesses the potential animal species exposed to risk.
Definition	Livestock and protected species.
Strengths and weaknesses	+ It helps to highlight the density of fauna at risk under current, design and/long-term scenarios (e.g., NBS implementation); the Indicator could significantly change in the design and long-term scenario, if the NBS implementation could produce the removal of hazard affecting local fauna habitats. - It could be difficult to obtain the statistical data needed to calculate the Indicator.
Measurement procedure and tool	The final formula of Domestic and Wild Fauna at Risk (*DWFR*), for each specie *i* and habitat type *k* results as: $$DWFR = \frac{\sum_i \sum_j \delta_i \cdot h_j + L}{A}$$ where: δ_i is the density of the i-th specie living in the habitats in the study area exposed to risk [nr/ha] h_j is the extension of the j-th habitat in the study area exposed to risk [ha] *L* is the number of head of livestock living in the study area exposed to risk [nr] A is the extension of the study area [ha]
Scale of measurement	nr/ha
Data source	
Required data	The density of species could be obtained from literature data. The extension of habitats is easily calculated using a simple GIS routine, as follows:

	1) The intersection between the shapefile of the habitats, obtainable from the Corine Land Cover Project, and the shapefile of the hazardous area is achieved using the geoprocessing tool “Intersect”; 2) The spatial extension of the output of the previous step, i.e., the portion of habitats falling within the hazardous area, is calculated using the “calculate geometry” tool.
Data input type	Quantitative
Data collection frequency	Annually
Level of expertise required	Low
Synergies with other indicators	Related to indicators measuring the extension of areas exposed to risk and to indicators describing land uses and land use transformation.
Connection with SDGs	15
Opportunities for participatory data collection	Economic stakeholders can be involved into the indicator measurement, as regards the estimation of number of head of livestock living in the study area exposed to risk
Additional information	
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