



## WP 2 – BE and SLOD: SoA, risks and human behavior

**T2.2 – SoA on SLOD (heat wave and pollution) in BE and their effect on health and wellbeing of its users. Methods for data collection and analysis (on medium/long term datasets). Correlation between pollution and climate data (e.g. wind, rain, fog). Current mitigation solution analysis. Identification of BE features and users' (inappropriate) behaviors modifying SLOD effects/risk levels. Development of indicators and relative weights for selected SLOD risk levels assessment**

### DELIVERABLE NUMBER D2.2.3 – IMPACT OF USERS' BEHAVIOR AND BE ON SLOD RISK LEVELS REPORT

**ABSTRACT.** Slow-onset disasters such as air pollution and increasing temperature in our cities have currently acquired great relevance in the context of the safety, health and wellbeing of the Built Environment and of its users. In this sense, many researches tried to investigate the relations between the SLOD conditions, the BE and the users' behaviors and well-being, with the final aim to firstly model such interferences and then provide risk-reducing measures on the hosted population. In this sense, factors related to individual vulnerability (e.g. behaviours, gender, age, health fragility, other features and motion quantities) are essential since they can alter the final risk level in combination with exposure-related issues.

These models development should be based on the understanding of probable human behaviors and their impact in the considered BE and SLOD contexts. To this aim, this deliverable focused on the organization of a complete state of the art concerning the impacts of SLODs on the behaviour, on the health, on the well-being, and on the habits of citizens, as well as on the related impact of users' behaviours on the BE risks. A categorization of the different issues encountered allows processing several aspects in a spate manner, by mainly evidencing impacts of users' behaviours, on users' health/wellbeing and of the whole community hosted in the urban areas where the BE is placed. According to the existing literature, BE and SLOD features are organized and the human factor (exposure-related issues and individual vulnerability) is jointly considered to move towards behavioral characterization in significant scenarios for air pollution and increasing temperatures in the BE. Although classifications of recurrent human behaviors seem to be more limited than in Sudden onset events researches, results evidence the bases for next modelling actions (in relation to the risk matrix developed by D2.2.5) to be used in WP3 and WP4.

