

## Project Title: Assessment of Marginal Workers in Tamil Nadu: A Socioeconomic Analysis

### Phase I: Project Definition and Design Thinking

**Project Definition:** The main challenge in socioeconomic vulnerability assessment is the consideration of diverse factors with inadequate data. Considering this, different frameworks, such as the Pressure and Release (PaR) model [18], Cutter's Hazard of Place (HoP) model [19], the vulnerability framework of Turner [20], the BBC model [21], and the Disaster of Resilience of Place (DROP) model [22] have been developed. Among them, the HoP and DROP models are widely used for the estimation of social vulnerability due to various natural hazards [23]. Zhang et al. [23] assessed social vulnerability to earthquake hazards for Sichuan province using a catastrophe progression method. Frigerio et al. [17] developed a qualitative social-vulnerability-exposure map for Italy combining the social vulnerability index (SVI) and seismic hazard (SH) maps. Derakhshan et al. [24] identified the spatial vulnerability to seismic hazards for the Oklahoma region integrating loss scenarios, social vulnerability metrics, and potential physical damage in a geographic information system (GIS) environment. Cerchiello et al. [25] assessed social vulnerability for Nablus city using a scorecard approach, based on the information derived at the population and local administration level. Ebert et al. [26] assessed social vulnerability for the Tegucigalpa region and determined the SVI with the help of proxy variables derived from high-resolution optical and laser scanning data. Gautam [27] selected 13 variables and quantified the SVI of Nepal at the district scale by using the available census data, and the final index was mapped using GIS. Siagian et al. [28] quantified the SVI for the districts of Indonesia selecting socioeconomic status, gender, age and population growth, and family structure. Armas and Gavris [29] selected the SVI and SeVI to assess the social vulnerability of Bucharest using the multi-criteria approach.

### Design Thinking:

1. **Project Objectives:** Migration acquires great significance in the study of peoples and populations, for it not only involves the merely mathematical spatial redistribution of people, but also because it has enormous impact on livelihood, life-styles, employment, socioeconomic and political stability; or in other words, it influences the entire society.
2. **Analysis Approach:** In this Indian scenario, voluntary migration (where the migrants move of their own choice) often takes place with the view to secure a livelihood.
3. **Visualization Selection:** Migrant workers are more vulnerable to HIV/AIDS than the local population because of their poverty, lack of power, lack of health awareness and unstable life-style.