

Key research methods and methodological principles:

This research aims to assess the scope of the most prominent problems facing humanity in the 21st Century, using a uniform and comparable measurement scale.

To this end, a comprehensive review of literature and significant policy documents was conducted, leading to the selection of 30 universal problems relating to health, social and environmental issues that greatly impair the lives of people around the world. Additional problems reviewed and filtered out in preliminary stages of the research are documented in the sheet Filtered Problems.

In order to place the problems on a uniform measurement scale, the scale of each problem was quantified by assessing the direct harm and negative impact it has on humanity according to three levels of severity during a single year:

- A. The number of people who died as a result of the problem;
- B. The number of people who suffered from serious physical harm caused by the problem;
- C. The total number of people negatively affected by the problem (or a prominent aspect).

Note: Some of the problems do not pertain to all three levels of severity, or there are no reliable data available for all three levels. In such cases, data is represented solely for the relevant levels for which data is available.

Calculations of "Harm":

1. Harm data was collected from databases or reports of large international or national organizations and agencies. For each problem, the most recent reliable data available was selected while ensuring that: (a) the data is recent enough – from 2016 or later; (b) the data is not limited to the COVID-19 pandemic (2020-2021), unless existing evidence indicates that the scale of the problem was not significantly affected by the pandemic (References to the sources of the data are detailed in the Full Info sheet).

2. The scale of each problem was assessed in relation to two types of populations: (a) global scale of the problem; and (b) the scale of the problem in North America and Western Europe (a list of the included states is detailed in the Population size sheet). North America and Western Europe were chosen to represent the extent in which the problem negatively impact and harm population of the most developed countries, as they constitute the broadest (relatively homogenous in socio-economic terms) common denominator for which reliable data was accessible for all problems reviewed. Global scale assessments are detailed in the Global Data sheet, data for the selected developed countries is detailed in the Developed World sheet.

3. To calculate the absolute number of people affected by a problem based on estimates and data presented in terms of rate, we used the population size in the year in which the data was collected. Since we relied only on data sources from the past 6 years, there were no significant changes in the size of the population during that period in a way that would substantially compromise the rough estimates. Population size data were elicited from the World Bank "world development Indicators" dataset (as detailed in the Population Size sheet).

4. When the available data for a problem is based on missing information (typically because not all countries collect data systematically or share it with relevant international institutions) – an estimated scale for the problem was calculated based on the relevant proportion of the population missing from the data, taking into consideration the relative proportion of populations from developed or underdeveloped countries among the missing data.

5. When the data refer to the rate of the problem in a specific segment of the population (for example, rates of elderly abuse, rates sexual assault of women, rates of non-communicable diseases among a population younger than 70, etc.), the number of those harmed by the problem is calculated in relation to the size of the specific population group, as elicited from The World Bank database. The specific population data and relevant calculations are detailed in the Full Information sheet of the study.

Important disclaimer: Existing data relating to many of the problems reviewed may be limited and/or of inconsistent quality. In fact, many developing countries in the world do not collect or do not report data systematically. This is particularly problematic with regards to China and India – which have the largest populations in the world, highly affecting the assessments of the global scales of each problem. Therefore, it should be assumed that in many cases the existing data represent an underestimation of the real scope of the global problem, especially in the developing world. For this reason, the headcounts should be regarded merely as rough estimates, and serve mainly as a comparative tool. In extreme cases, in which the scope of the problem in developing countries (compared to the developed countries) is especially challenging, an unrealistic ratio between the global vs. developed countries scale is observed. Such cases are

Problem	Data reliability - Annual death	Data reliability - Annual severe harm	Data reliability - Annual global scale
Homicide	UNDOC estimates		
State sanctioned death & arbitrary detention	Underestimated - leading executioners, like China, Vietnam and North Korea, do not allow access to info. Most developed states - US only.		Based on data from 57 countries.
Conflict-related deaths			
Domestic violence against women		A calculation based on WHO estimates from 2013 of women who experience intimate partner violence and report injuries as a consequence.	Based on population size by the world bank.
Child abuse	WHO estimates		Most developed states - extrapolation from the US to include prediction in West Europe and Canada.
Elderly abuse			WHO estimation
Forced marriage			Data on men from 65 countries, and on women from 99 countries.
Maternal morbidity		Most developed states - roughly estimated extrapolation from US data to North America and Western Europe.	
Newborns mortality			
Mortality under 5	Unicef estimates		
Severe communicable diseases			
Noncommunicable diseases	Calculations for most developed countries were based on the percentage of deaths from NCDs under 70, multiplied by the number of deaths from NCDs for all ages.		
Drugs use	The ratio of reported deaths globally and in developed countries seems too small, there is a problem of underestimation of the number of deaths globally.		The ratio of reported cases globally and in developed countries seems too small, hinting there is a problem of underestimation of the global numbers. The data on Europe is based on UNODC's estimated rate of people suffering from drug use disorders among the overall population of drug users.
Mental health	Most developed states - self harm only.		Mental health definitions, awareness and reports vary by culture, likely to be underreported, particularly in the developing world.
Malnourishment		Insufficient and unclear data on developed states.	
Forcibly displaced people (across international borders)			
Access to education (pre-primary and primary)			Based on available data, the data on the developed world includes data from all of Europe and North America.
Access to education (secondary)			
Severe working conditions	ILO Estimates		The most recent data reported by the ILO for global estimates are from 2003. However, very broad estimates from more recent years range around similar numbers - about 300 million.
Civilian artillery accidents			
Road traffic accidents			
Forced labor & slavery		The scales reports on the number of detected victims. The estimates for the number of human trafficking victims is a lot larger - estimated to be around 25 million victims worldwide, according to UNODC.	No available data on countries in North America and Western Europe.
Extreme poverty			
Inadequate housing			
Air pollution			
Unsafe water			
Natural disasters			
Sexual assault		Based on data from 146 countries (22 in the developed world calculation). Ratio of global vs. developed world data hint underestimation of global data.	
Internal Displacement			