

Global risk and emergency. Risk assessment and management – the “hidden factors”

Antoaneta Frantzova

(Geological Institute at Bulgarian Academy of Sciences, Department of Geological Hazards, Bulgaria)

Abstract: The recent paper underline the nowadays questions emerged and related with climate change, disaster displacement and migration. It's deal with people' vulnerability, consequences and legal framework. The newest researches suggest that half a billion people could be pushed into poverty as economies around the world shrink because of the coronavirus outbreak.

Background: Risk is all around us. After the events of 2020, it's not surprising that the level and variety of risks we face have become more pronounced than ever. This is especially important for global risks that have a direct or indirect impact on the national security system, as a key element of the country' critical infrastructure. So the risk assessment became one of the most important. The paper represents and discuss the scientific methodology for complex emergencies related to climate change, pandemics, air pollution, migration, etc. causing many primary and secondary dangers that can radically change the lives of individuals and communities.

Materials and Methods: New developed and adapted methodology for risk assessment examines the so-called "invisible" factors involved in the assessment and management of global risks and hazards. Climate change, pandemics, cause many "secondary" dangers that radically change the lives of individuals and social societies. The main attention is paid to the perception of the risk which has a direct impact on the management of a given hazard.

Materials used are based on peer review publications as well as official data and information. No preference is given and the author takes a neutral position with respect to authors, publication and information provided. Attention is paid to the risk perception as a factor determining the reactions, behavior and actions of people.

Results: New developed and adapted methodology is put into practice and presented in details in []. Natural events cannot be dealt separately- so called “the hidden factors” have to be taken into account in risk management process. Nowadays...turn into complex emergency

Conclusion: New developed and adapted methodology for risk and multi-risk assessment, includes risk perception and “hidden factors” as a part of the risk assessment is presented. The secondary effects of the COVID-19 pandemic, such as recession, social unrest, poverty unemployment, could trigger unpredictable and widespread not only mental health but social and security challenges. There is high agreement among scientists that climate change, in combination with other drivers, is projected to increase displacement of people in the future. The experts said: “Developing countries are facing an unprecedented collective threat to human life, social cohesion and economic devastation. Massive economic losses will be incurred as countries desperately try to cope; people will migrate out of fear as the epidemic takes hold, leading to social disruption, violence and security issues.” [44]

Key Word: Climate change, migration, displacement, COVID-19, risk assessment, natural events

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I. Introduction

Risk is all around us. After the events of 2020, it's not surprising that the level and variety of risks we face have become more pronounced than ever. This is especially important for global risks that have a direct or indirect impact on the national security system, as a key element of the country's critical infrastructure

II. Material And Methods

Global Risks

Every year, the World Economic Forum (WEF) analyzes the top risks in the world in its Global Risks Report. Risks were identified based on 800+ responses of surveyed leaders across various levels of expertise, organizations, and regional distribution.

In mid-2020, the WEF quantified the biggest risks over an 18-month period, with a prolonged economic recession emerging on top. In the Global Risks Report's assessment, global risks are classified by likelihood and expected impacts.

The infectious diseases have now become one of the top risks on both metrics of likelihood and impact. Environmental risks continue to dominate, especially when it comes to climate action failure. As for other risks, the prospect of weapons of mass destruction ranks in third place for potential impact. In the global arms race, a single misstep would trigger severe consequences on civil and political stability (World Economic Forum, 2021).

Through this perspective, COVID-19 (and its variants) remains high in the next two years as the world scrambles to return to normal, so more economic risks falling in the center stage.

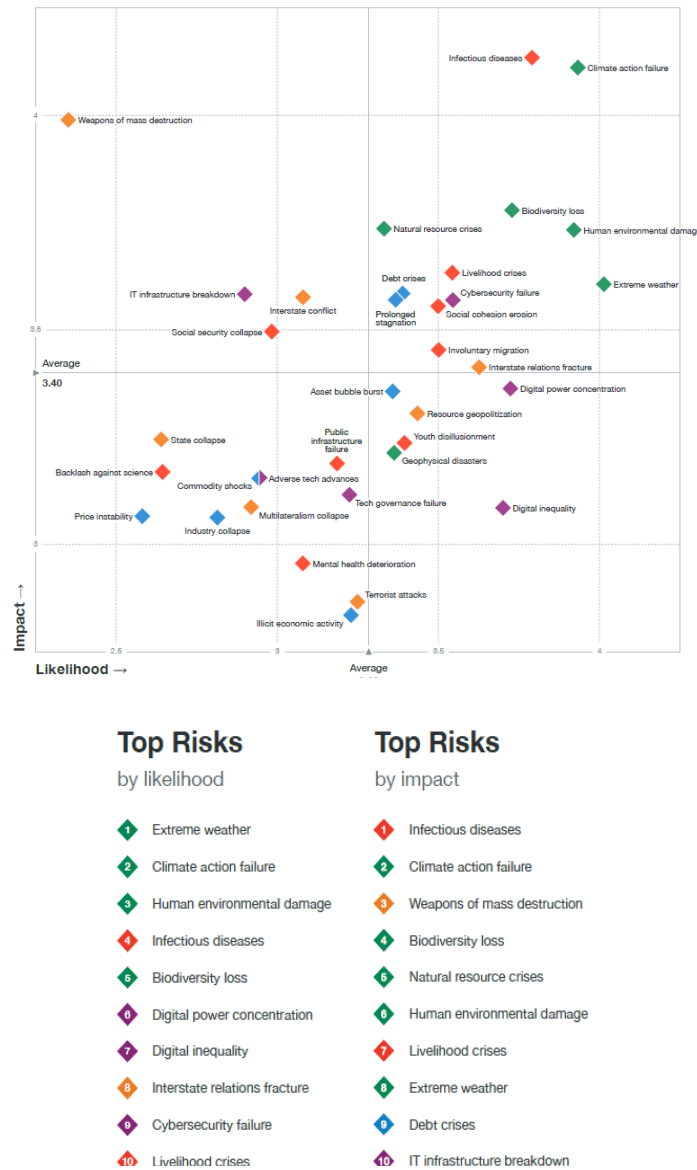


Figure 1: New Risks in 2021 according to the World Economic Forum 2020 Likelihood and Impact [1]

The “hidden factors”

Various aspects of the complex emergency related to SARS-Cov-2

Mental health problems

COVID-19 began as a health crisis, then quickly became an economic crisis and an energy crisis, highlighting the inherent interdependencies of global risks. The extent of the crisis will ultimately be determined by our collective ability to understand and act on these interdependencies across social, economic and political imperatives, in a spirit of partnership among civil, public and private sectors. Critical global risks have not gone away and many are actually exacerbated by the current crisis, including cyberattacks, inequality, social instability and even the potential for future infectious disease outbreaks.

According to the KFF Health Tracking, there are a variety of ways the pandemic has likely affected mental health, particularly with widespread social isolation resulting from necessary safety measures. A broad body of research links social isolation and loneliness to both poor mental and physical health.

History has shown that the mental health impact of disasters outlasts the physical impact, suggesting today’s elevated mental health need will continue well beyond the coronavirus outbreak itself. For example, an analysis of the psychological toll on health care providers during outbreaks found that psychological distress can last up to three years after an outbreak. Due to the financial crisis accompanying the pandemic, there are also significant implications for mortality due to “deaths of despair.” [3]. An analysis from May 2020, conducted in USA, projects that based on the economic downturn and social isolation, additional deaths due to suicide and alcohol or drug misuse may occur by 2029 (Brooks et al., 2020).

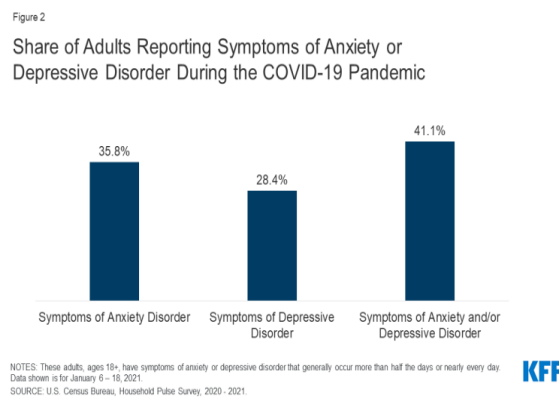
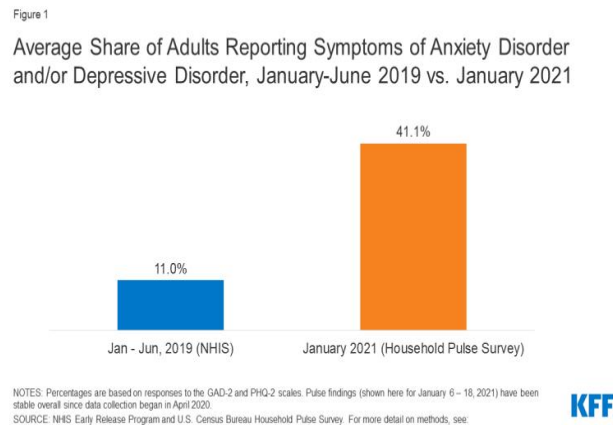


Figure 2: Average Share of Adults Reporting Symptoms of Anxiety Disorder and/or Depressive Disorder, January-June 2019 vs. January 2021 in USA (left) [2]

Figure 3: Share of Adults Reporting Symptoms of Anxiety or Depressive Disorder during the COVID-19 Pandemic in USA (right) [2]

Research on the psychological toll of social distancing during epidemics is limited. But a review in the March 14 2020, Lancet provides some clues. Researchers evaluated 24 studies looking at the psychological outcomes of people who were quarantined, an extreme form of social distancing, during outbreaks of SARS, H1N1 flu, Ebola and other infectious diseases since the early 2000s. Many quarantined individuals experienced both short- and long-term mental health problems, including stress, insomnia, emotional exhaustion and substance abuse. [1,4,5].

In 2015, Holt-Lunstad and her colleagues did a meta-analysis of 70 studies involving more than 3.4 million participants followed for an average of seven years. The likelihood of dying during the study period increased by 26 percent for those who reported loneliness (feeling alone), 29 percent for those who were socially isolated (having few social contacts) and 32 percent for those living alone, the team found [6].

Based on data from 48 studies, encompassing 204 countries and territories, the researchers determined that this pandemic-inspired increase brought the global total for anxiety disorders to 374 million people. The pandemic’s impact on mental health worldwide, according to the research, also included an increase in the number of people reporting depression, with about 53 million new cases of depressive disorder in 2020

attributed to the pandemic. That represents an increase of 28 percent from the preceding year. The researchers noted that “emerging evidence” indicates that the pandemic may be having a similar effect on other health issues, such as eating disorders, furthering the need to strengthen mental health care in most countries [7].

COVID-19 and air pollution

Some data highlighted the possible association between concentration of air pollutants and the high spread of COVID-19 in northern Italian regions (8, 910). A study based on initial epidemic diffusion reported a relationship between exceeding the legal limits of PM10 concentrations and the number COVID-19 cases [10,11,12]. The analysis showed a direct relation between COVID-19 cases and PM10 pollution concentrations [10,11,12]. Another study investigated the correlation between the degree of accelerated diffusion and lethality of COVID-19 and surface air pollution in the metropolitan area of Milan [13] Zoran et al., 2020). The results showed that high levels of urban air pollution had a significant impact on increasing the rates of total cases of COVID-19 [13,14].

The situations seem to be similar throughout the world. In USA an increase in PM2.5 concentrations was linked to a statistically significant increase in daily SARS-CoV-2 death rate (an increase of 1 µg/m3 of PM2.5 levels was associated with an 8% increase in the COVID-19 death rate) [10,14]. Overlapping results were obtained in an analysis conducted on 355 municipalities in the Netherlands, where PM2.5 resulted to be a significant predictor of both the number of confirmed COVID-19 cases and related hospital admissions per 100,000 inhabitants [15]. There is also evidence of a positive correlation between PM2.5 levels and COVID-19 infection in India and Pakistan [10,16], two countries with the worst air pollution in the world [10, 17, 18]. COVID-19 began as a health crisis, then quickly became an economic crisis and an energy crisis, highlighting the inherent interdependencies of global risks. The extent of the crisis will ultimately be determined by our collective ability to understand and act on these interdependencies across social, economic and political imperatives, in a spirit of partnership among civil, public and private sectors. Critical global risks have not gone away and many are actually exacerbated by the current crisis, including cyberattacks, inequality, social instability and even the potential for future infectious disease outbreaks.

According to the AntónioGuterres, United Nations “Even when the pandemic is brought under control, grief, anxiety and depression will continue to affect people and communities.”

According to the KFF Health Tracking, there are a variety of ways the pandemic has likely affected mental health, particularly with widespread social isolation resulting from necessary safety measures. A broad body of research links social isolation and loneliness to both poor mental and physical health.

History has shown that the mental health impact of disasters outlasts the physical impact, suggesting today’s elevated mental health need will continue well beyond the coronavirus outbreak itself. For example, an analysis of the psychological toll on health care providers during outbreaks found that psychological distress can last up to three years after an outbreak. Due to the financial crisis accompanying the pandemic, there are also significant implications for mortality due to “deaths of despair.” A May 2020 analysis done in USA projects that, based on the economic downturn and social isolation, additional deaths due to suicide and alcohol or drug misuse may occur by 2029 [19].

Poverty and gender gap

Global extreme poverty is expected to rise in 2020 for the first time in over 20 years as the disruption of the COVID-19 pandemic compounds the forces of conflict and climate change, which were already slowing poverty reduction progress, the World Bank reported. Many of the new poor will be in countries that already have high poverty rates. A number of middle-income countries will see significant numbers of people slip below the extreme poverty line. About 82% of the total will be in middle-income countries, the report estimates [20].

Middle income countries are home to 75% of the world’s population and 62% of the world’s poor. At the same time, MICs represent about one third of global GDP and are major engines of global growth [20].

The convergence of the COVID-19 pandemic with the pressures of conflict and climate change will put the goal of ending poverty by 2030 beyond reach without swift, significant and substantial policy action, the World Bank said. By 2030, the global poverty rate could be about 7%. This suggests that without policy actions, the COVID-19 crisis may trigger cycles of higher income inequality, lower social mobility among the vulnerable, and lower resilience to future shocks [20].

In a survey done in 2020 more than 10,000 people in nearly 40 countries, 55% of women reported a significant impact from COVID-19-related income loss, compared with 34% of men, while 27% of women experienced increased struggles with mental health issues, compared with 10% of men [21].

Climate Refugees

Adaptation to climate change has its limits. While it carries the potential to prevent some forced migration related to climate change, large scale population migrations related to climate change are expected in

decades ahead. The World Bank recently estimated that 143 million people may become internally displaced by 2050 [22].

At present, international humanitarian law does not clearly provide protections for those that have been displaced by climate change, whether within their home countries or beyond their home nation’s borders. Legal refugee status can only be granted once an individual has left their home country. Furthermore, those individuals who may be forced to leave their home countries due to, as examples, extreme weather events or sea level rise associated with climate change, may not be eligible for refugee status.

Recently, the United Nations, regional organizations, and individual nations have sought to provide greater protections to people forced to move because of extreme weather events and other climate related disasters. The Kampala Convention of the African Union provides one such example that specifically addresses internal displacement owing to climate change related events [23,24]

Moving when you don’t want to is more difficult, more stressful, and often must happen very quickly. Distressed migrants often have substantial health burdens caused by nutritional deficiencies, trauma, infections, mental illness, and pollution exposure.

Some evidence suggests that access to nutrition in refugee camps has improved in recent decades owing to better preparedness and delivery of nutrition. Nevertheless, nutritional deficiencies are commonplace among those forced to move from their homes against their will [25,26,27]

Overcrowding and lack of basic sanitary infrastructure including running water and toilets makes refugee and internally displaced person camps prone to infectious disease outbreaks. Waterborne and vectorborne diseases, such as cholera and malaria, respectively, can also be prevalent as water scarcity leads to bacterial water contamination and open water storage where mosquitos may breed.

Such camps often lack governance, and interpersonal violence. Trauma, both physical and emotional, are common among distressed migrants and have been associated with incidence of post-traumatic stress disorder and depression. People forced to migrate can face a variety of health problems. But even before migration occurs, people who face the prospect of migration, such as those living in small island states can have substantial anxiety about their future [25].

Another kind of forced migration that occurs when people must move to find work. In some cases, this may occur when natural disasters or other climate related events lead to people seeking a livelihood elsewhere.

While forced migration fosters ill health as it occurs, harms may unfold for decades, if not for generations. Some research suggests that refugees may have mental health disorders as well as higher mortality rates years after they have resettled [25].

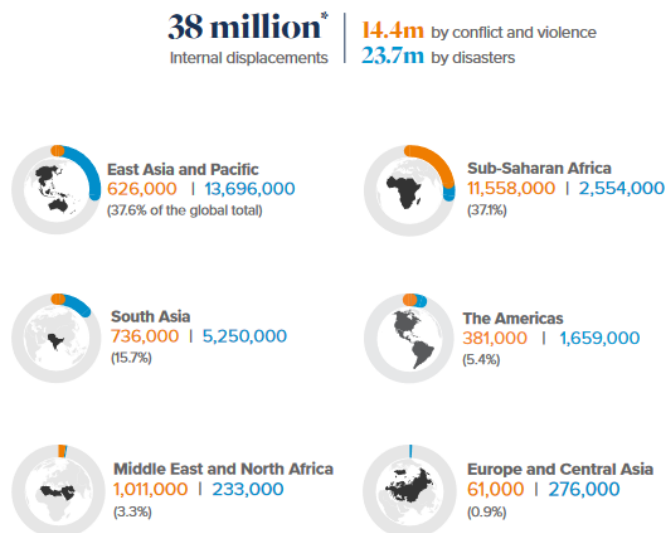


Figure 4: Internal displacements by conflict, violence and disasters per region – 2021 [28]

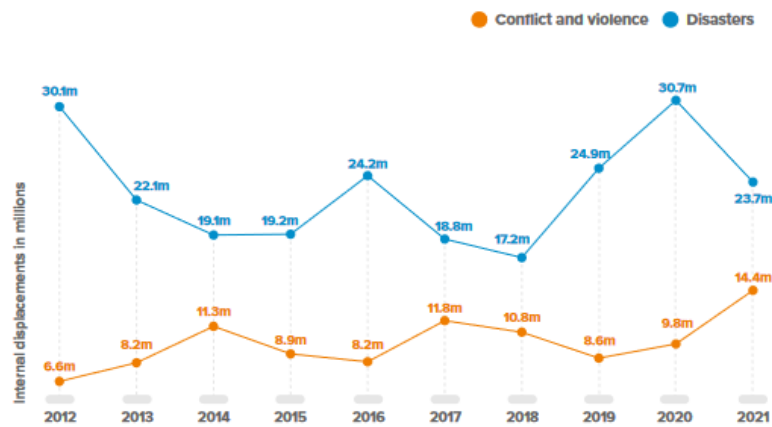


Figure 5: Internal displacements by conflict, violence and disasters worldwide (2012-2021) [28]

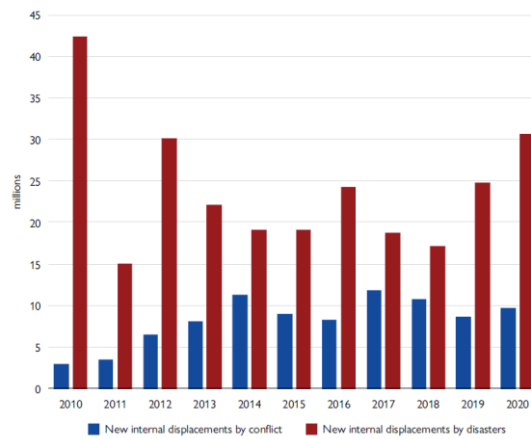


Figure 6: New displacements by disasters and conflict 2010-2020 [29]

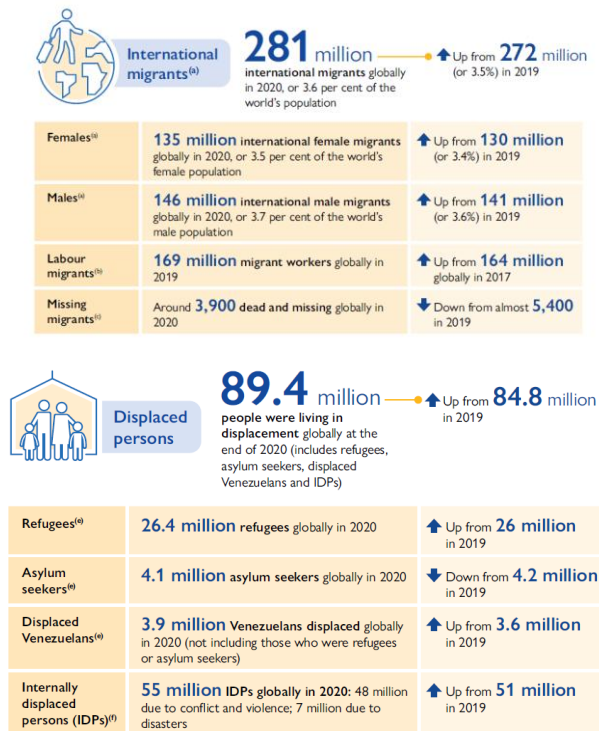


Figure 7: InternationalMigrants and Displaced people [29]

III. Risk assessment of natural events, disaster and crisis

The „nature“of risk - common considerations

The risk assessment (analysis) of natural hazards is a disaster preparedness activity including pre-disaster risk reduction phase of the risk management process. Risk analysis is a base for decision making and the main tool for the risk management and scenarios development about the risk reduction.

UN terms and definition are accepted and approved among risk management specialists. According that, risk assessment includes three main activities: vulnerability, hazard and coping capacity assessment.

Risk – the probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disruption or environment damaged) resulting from interactions between natural or human-induced hazards and vulnerable conditions. The term risk refers to the expected losses from a given hazard to a given element at risk, over a specified future time period. The first definition is given by [30]

$$\begin{aligned} \text{Risk} &= \text{Hazard potential} \times \text{Vulnerability} \quad \text{or} \\ \text{Risk} &= \text{Hazard} \times \text{Vulnerability/Coping capacity} \quad [31] \\ \text{Risk} &= \text{function of (Hazard, Exposure, Vulnerability)} \quad [43] \end{aligned}$$

Methodology for risk assessment

In the last few decades two main methodology for risk assessment have been developed: Inter-American Development Bank and Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ) and EC ESPON project(2000-2006), including and EC-JRC' s Recommendation [43]

The IADB methodology use all risk factor: Hazard, Exposure, Vulnerability and Copping Capacity the purpose of the risk assessment described in details in [32].

The main components (called risk factors) values are determined as follows [32]:

$$\begin{aligned} H &= w(H1) \times H1 + w(H2) \times H2 + w(H3) \times H3 + \dots + w(Hn) \times Hn \\ E &= w(E1) \times E1 + w(E2) \times E2 + w(E3) \times E3 + \dots + w(En) \times En \\ V &= w(V1) \times V1 + w(V2) \times V2 + w(V3) \times V3 + \dots + w(Vn) \times Vn \\ C &= w(C1) \times CC1 + w(C2) \times CC2 + w(C3) \times CC3 + \dots + w(Cn) \times CCn, \end{aligned}$$

where H, E, V and CC are the values of the Hazard, Exposure, Vulnerability and Copping Capacity; H1,H2...E1,E2...V1, V2....C1,C2....refer to the scaled values of the indicators; and w_i are the weights. A total sum of the weighting coefficients must be equal to 100.

The risk profile for the given selected area is expressed as[32]:

$$R = (wH + wE + wV) - wCC$$

where R is the overall risk index, H, E, V and C are the factors value of the hazard, exposure, vulnerability and coping capacity, respectively and w_i is the weighting coefficient.

The new developed and adapted methodology for risk and multi-risk assessment, includes risk perception and “hidden factors” as a part of the risk assessment is presented in [33]. Considering the models and research, described in [32,33] risk perception can be accepted as a root foundation related to the risk management. Therefore, the inclusion in the risk assessment is imperative. The psychological variable „It won't happen to me" is associated with personal decisions. But the analogous psychological factors are the base of the human behavior and decisions. Risk perception as a key factor may be becomes the main reason for maximize vulnerability or respectively its reduction.

Thereby, the risk profile for the given selected area is expressed as [33]:

$$R = wH + wE + wV + wRP - wCC$$

where H, E, V and CC are the values of the Hazard, Exposure, Vulnerability, Coping Capacity and Risk Perception, respectively; H1,H2...E1,E2...V1, V2....C1,C2....refer to the scaled values of the indicators; and w_i are the weights.

Risk perception

Basic principles associated with the concept of risk perception

Risk perception refers to the way in which people understand and experience a phenomenon, with multiple factors influencing risk perception. Risk perception is a subjective judgment that people construct for a given risk [34]

People respond to the particular hazard in a manner according to their perception of the risk or danger, and their perceptions directly affect their behavior and actions.

Most often, people do not take actions on a hazard or risk because they do not believe it really exists. These subjective factors are of the main causes for creating and increasing vulnerability. People's risk decisions are tied to cognitive processes, such as in what way people understand and accept the information they provide. The theory set out in [35] for decision-making supports this way of thinking.

Psychological and sociological research into risk perceptions in recent years highlights the non-physical dimension of risk by showing that risk perception is based largely on personal experience, information

acquisition through mediation, and intuitive assessments that have emerged in the course of the biological, social and cultural evolution (36 McKenna, 1993).

What society defines and perceives as a risk is not necessarily directly related to the risk identified as such by scientific assessment methods (based on the probable hazard and likely negative consequences). In some cases the scientific risk assessment is radically different from what society perceives as a risk. This fact is of the utmost importance and any risk management policy must be taken into account.

On the one hand, people's behaviour is guided by their beliefs, sensations and perceptions, not by scientific models. Risk perception is not uncommitted with the "subject" of risk - in the long run, only those perceptions (risk-related) that are relevant to an experience and / or related to already experienced (real) consequences will prevail. Finally, but not least, people react according to their own “risk constructions”. Risk perceptions belong to contextual aspects, which must be taken into account in the overall risk management process (34,37Kahneman et al., 2000; Slovic, 2000).

According to [38], the majority of people consider the probability of being subjected to negative events to be lower for themselves than for others. This is an example of "unrealistic optimism". The central topics of risk perception studies include the concept of “bounded rationality”, "cognitive" and "cultural" theories. The concept of “bounded rationality” clarify that the choices and decisions of people faced with a threat are based on their knowledge and past experience. „Cognitive theory” is based on psychometric and cognitive psychology of risk. While the psychometric approach explores the choice of people to live in dangerous places, or to invest in risk mitigation measures, the cognitive psychological approach, research the ways in which the people think and decide on missing or uncertain knowledge of risk. On the other hand, cultural theory seeks to understand how the phenomenon of risk is socially and culturally constructed.

The authors of [38], suggest nine general properties of activities and technologies that are important for subjective risk assessment. They are: (1) voluntary exposure to risk, (2) immediate threat - immediate effects, (3) information about the risk from persons exposed to potentially hazardous/risky sources, (4) information about the risk from science, (5) risk control, (6) new and unknown risks, or old and familiar ones, (7) chronic / catastrophic - risks that can kill people at some time (chronic risk) or a risk that can kill great number of people at once (catastrophic), (8) ordinary/fear, i.e. whether people have learned to live with the risk and can think about it wisely and calmly, or it is a risk that people have a lot of fear of, and (9) the severity of the consequences.

The public, that includes all of us, tend to judge risks not by the numbers, but by the characteristics of the risk.

Some examples:

Global risks perceptions - World Economic Forum 2021 [39]

Global risks perceptions are presented by WEF's Surveys on Fig. 8 and Fig. 1. The Surveys depict personal feeling attitudes and perceptions concerning global risk.

Methodology: Survey respondents were asked to assess the likelihood of the individual global risk on a scale of 1 to 5, 1 representing a risk that is very unlikely and 5 a risk that is very likely to occur over the course of the next ten years. They also assessed the impact of each global risk on a scale of 1 to 5, 1 representing a minimal impact and 5 a catastrophic impact. To ensure legibility, the names of the global risks are abbreviated (World Economic Forum Global Risks Perception Survey 2019-2020).

Among the highest likelihood risks of the next ten years are extreme weather, climate action failure and human-led environmental damage; as well as digital power concentration, digital inequality and cybersecurity failure. Among the highest impact risks of the next decade, infectious diseases are in the top spot, followed by climate action failure and other environmental risks; as well as weapons of mass destruction, livelihood crises, debt crises and IT infrastructure breakdown [39].

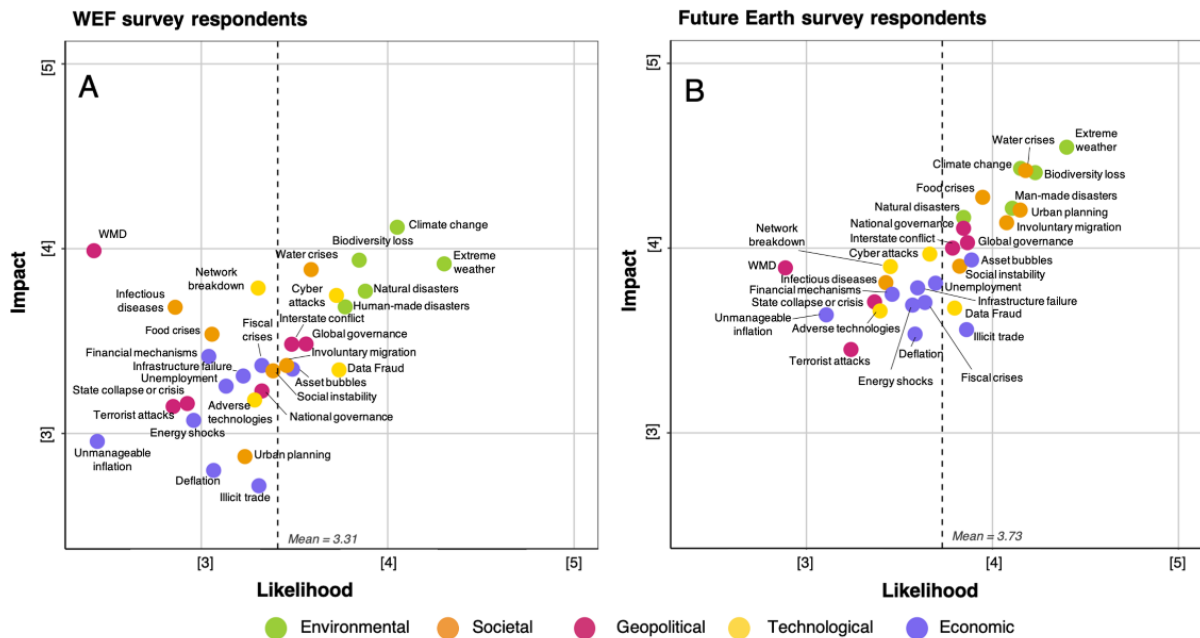


Figure 8: Perceived impact and likelihood of risks over the next 10 years in the (a) WEF and (b) Future Earth surveys (own figure, using data published in WEF,2020, left panel, and Future Earth. 2020a, right panel). The Future Earth survey mostly applied the assessment framework used for the WEF's Global Risks Report 2020. Thirty risks in five groups are considered in both surveys [39]

When it comes to the time-horizon within which these risks will become a critical threat to the world, the most imminent threats – those that are most likely in the next two years – include employment and livelihood crises, widespread youth disillusionment, digital inequality, economic stagnation, human-made environmental damage, erosion of societal cohesion, and terrorist attacks [39]. Responses to the pandemic have caused new domestic and geopolitical tensions that threaten stability. Digital division and a future “lost generation” are likely to test social cohesion from within borders—exacerbating geopolitical fragmentation and global economic fragility. With stalemates and flashpoints increasing in frequency, GRPS (Global Risks Perception Survey) respondents rated “state collapse” and “multilateralism collapse” as critical long-term threats [39].

Newness of COVID-19 vaccines and worries about side effects are top reasons why some remain unvaccinated

Risk perception related to COVID-19 vaccinations is presented via some example from an ongoing research project tracking the public’s attitudes and experiences with COVID-19 vaccinations performed by KFF (Kaiser Family Foundation). Risk perception related to COVID-19 vaccinations and beliefs in pandemic misinformation have been chosen due to their topicality and daily presence in the public space worldwide. It should be noted that the data are for the United States only [40,41].

Unvaccinated adults cite a variety of reasons why they have not gotten a COVID-19 vaccine, with half citing worries about side effects and the newness of the vaccine as major reasons (53% each). Other major reasons include just not wanting to get the vaccine (43%), not trusting the government (38%), thinking they do not need the vaccine (38%), not believing the COVID-19 vaccines are safe (37%), and not trusting vaccines in general (26%). When unvaccinated adults are asked to choose the main reason they have not yet gotten the COVID-19 vaccine, one in five cite the newness of the vaccine, followed by 11% each who say the main reason is that they are worried about side effects, they don’t trust the government, they don’t think they need the vaccine, and they just don’t want to get the vaccine (Fig. 8) [40,41].

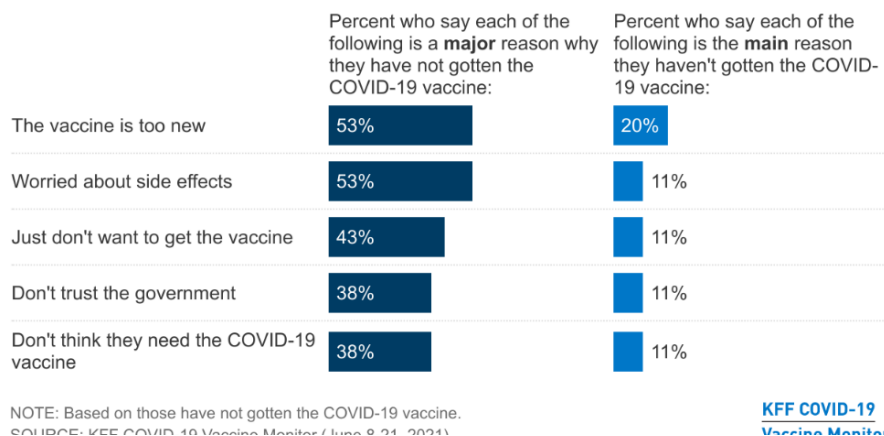


Figure 9: Reasons Why Some Remain Unvaccinated [40,41]

IV. Result and discussion

Moving when you don't want to is more difficult, more stressful, and often must happen very quickly. Distressed migrants often have substantial health burdens caused by nutritional deficiencies, trauma, infections, mental illness, and pollution exposure.

Some evidence suggests that access to nutrition in refugee camps has improved in recent decades owing to better preparedness and delivery of nutrition. Nevertheless, nutritional deficiencies are commonplace among those forced to move from their homes against their will [25]

According to Jennifer Leaning, climate change in itself is subtle. And it has been difficult because human beings are pretty adaptable [Harvard FXB Center]. And this subtle intensification of various features of climate change in terms of how humans perceive their ecosystem is accentuated by the fact that people adapt slowly. What happens in the real situation, is there comes time when people can't adapt anymore and what feels very sudden is not actually all that sudden. People have been adapting until they can't adapt anymore. By the way, that's how human physiology works too. You put a stress on the human body. It adapts until it no longer can and then it shows up as a disease. We're all going to be affected by climate change. The impact is disproportionate - not everybody has the same impact as other; hot places get hotter, wet places get wetter.

People who are stuck in a very dangerous, unsafe, unhealthy, dry or overly wet place, poorest people, water, again, energy, all these issues are clearly tightly tied to a lot of forced migration. These are people with extreme vulnerability.

There are two points that are very important. One is the legal framework, and the other is how do wealthy nation states adapt to an influx of "the other." The legal framework is not designed to deal with people who are distressed migrants from disaster. They're not persecuted. They have not been individually assaulted by a political apparatus or by a war on the basis of who they are. And the Refugee Convention has a very narrow definition. And you have to prove that you were persecuted, that you have been persecuted because of your race, your religion, your nationality, your membership in a particular social group, or in a particular political group. A uniform legal definition of the term 'migrant' does not exist at the international level.[24]

Many people actually want to stay home. Or if they want to move, they want to do it freely- their own choice. But they can't stay home because the livelihoods collapse, which is linked to the climate change and overpopulation. In Europe most of the countries are fairly homogeneous. They are pretty heavily densely populated. And to take in large numbers of people who are not of the nationality, or the race, or the religion of many European countries now know is a stretch. It's a push [25].

But the highest risk of the migration and displacement emerged for SARS-CoV-2. The newest researches suggest that half a billion people could be pushed into poverty as economies around the world shrink because of the coronavirus outbreak. It could turn back the clock 30 years on global poverty [46]. Covid-19 is not only a health crisis, it's a migration crisis.

V. Conclusion

New developed and adapted methodology for risk and multi-risk assessment, includes risk perception and “hidden factors” as a part of the risk assessment is presented.

The secondary effects of the pandemic, such as recession, social unrest, poverty unemployment, could trigger unpredictable and widespread not only mental health but social and security challenges. The one in four people will experience mental illness in their lives, costing the global economy an estimated \$6 trillion by 2030

[45]. There is high agreement among scientists that climate change, in combination with other drivers, is projected to increase displacement of people in the future.

The experts said: “Developing countries are facing an unprecedented collective threat to human life, social cohesion and economic devastation. Massive economic losses will be incurred as countries desperately try to cope; people will migrate out of fear as the epidemic takes hold, leading to social disruption, violence and security issues.” [44].

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