



# Review of horizon scanning literature on the context for humanitarian and crisis response

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## Question

*What horizon scanning literature exists regarding the evolving context for humanitarian and crisis response, and the associated implications (risks and opportunities) for the UK's policy reform efforts? Including*

- *The changing nature of conflict and the international system*
- *Changing risk landscapes*
- *The changing nature of crisis response and stakeholders*

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# 1. Summary

This annotated bibliography has found a range of horizon scanning reports that identify climate change, a change in the global balance of power, and new technologies as some of the key drivers affecting the global context for humanitarian actors. Many reports identify increasing uncertainty in key systems, and the possibility of large, systemic crises.

This report focuses on future-focused literature with direct or indirect implications for disaster response. It does not include reports that outline key trends in demography, climate or natural resources. Rather it focuses on reports that discuss the implications of these trends for humanitarian and disaster response, namely, discussions of the humanitarian system, climate change, demography, global governance, international relations and the likelihood of conflict, and new technology with the capability of harming civilians or improving humanitarian response. Some reports focused on current trends, levels or preparedness, or risks are included as they are likely to be valid for the next decade, even if they are not explicitly packaged as 'forecasts'.

This K4D literature review includes both trend-based analyses, and more qualitative discussions of scenarios, points of change, and possible disruption. Many reports use more than one method. Many reports use experts to identify risks and trends, rank their importance, or discuss their implications and possible effects, usually taking a range of views from different disciplines. Most reports point to the possibility of 'unknown unknowns' of some variety. No attempt is made to assess the likelihood, or quality, of the forecast, beyond noting their evidence bases and type of analysis.

All of the reports accept a level of uncertainty in their forecasts. While trends in, say, demography can be projected forwards, this usually takes the form of low, medium and high estimates. This means that when complex changes involving more than one trend are forecast, the uncertainty is multiplied. For instance, the poor are seen to be more vulnerable to climate change, but climate change can also push people into poverty; some measures to alleviate poverty, such as increased food production or economic activity, may itself worsen climate change. Processes such as climate change, affecting multiple domains of life, bring widespread uncertainty. In addition to the combination of complex processes, several scholars emphasise the increased role of 'fat tailed' (i.e. low probability, high impact) risks in our interconnected world (Humanitarian Futures, 2018; Ministry of Defence, 2018).

The report has not focused on existential risks (Centre for the Study of Existential Risk, n.d., 2019; Future Earth, 2020; Mecklin, 2020; Ng, Dafoe, & Gaffney, 2009). However, many horizon-scanning reports based on extrapolating trends, also point to the possibility of unexpected events, and their likelihood of causing significant damage given the interconnectedness of the world and the scale of new threats. Climate change and ecosystem collapse are highlighted as problems that may affect multiple geographical areas and domains of life, and whose effects may not be focused on poorer countries (e.g. 'tipping points' and systemic risks) (Kent, 2018, p. 6; Ministry of Defence, 2018).

There is a widespread agreement on the trends and drivers likely to shape the context for humanitarian action and crisis response in the coming decade. These include:

- Climate change is predicted to have a significant effect based on current predictions of a rise of 1.5°C-2°C globally, and an even greater effect if the rise is more. There is

disagreement over whether and how climate change will cause conflict and migration or not, and as to how many people it will affect in which locations (IFRC, 2019a; NSMIP, 2020; ODI, 2013; Peters et al., 2019). Effects generated by the lower end of predicted global temperature rises (1.5°C-2°C) are more likely to be confined to already arid or low-lying regions and fragile states with little capacity for disaster management, whereas rises of over 2°C are expected to have wider and less predictable effects.

- Demographic growth and urbanisation putting more pressure on food supplies, water, ecosystems and governance (Benton, 2019; FAO, 2018; Foresight, 2012).
- The possibility of ecosystem collapse as a threat to food supplies (Future Earth, 2020; World Economic Forum, 2020).
- Threats to health from changing climates, pollution and the depletion of resources will increase (Watts et al., 2019).
- Increased migration as a result of the above drivers, in turn threatening stability and global co-operation (Global Governance Futures, 2019; Yayboke & Gallego, 2019).
- New technologies such as artificial intelligence (AI) bringing threats such as misinformation or systems collapse, as well as opportunities for better governance or aid delivery (IARAN & CaLP, 2019; Ministry of Defence, 2018).
- Shift in the global balance of power, with countries such as China and India likely exercising more hard and soft power, the possibility of more conflicts, and different forms of global governance and co-operation for humanitarian crises, and the greater role of new actors such as cities or private charitable foundations (Global Governance Futures, 2020).
- As a consequence of some of the above drivers, many point to the increasing scale of crises and natural disasters (IFRC, 2019a; ODI, 2013).
- Many also highlight the interconnectedness of risks and the possibility of systemic failures and 'cascading' crises (Humanitarian Futures, 2018; Ministry of Defence, 2018; UNDRR, 2019).

Some trends are seen as relatively predictable for the near future, such as demographics (Foresight, 2012, p. 38). Most reports imply that political systems, ideologies, and levels of global co-operation, are less predictable, and many use these as independent variables. The 'humanitarian system' is one such variable, although it is seen to be dependent on the willingness of Western donors to support it, and rising powers such as China to buy into its values and processes (Donini, 2019; IARAN, 2017). Reports sketch different scenarios of global co-operation in response to the trends and challenges, with many pointing to the increasing role of non-Western states, non-state actors (such as cities and corporations), and new technologies, shaping how these problems are dealt with.

## 2. Introduction

Horizon scanning is defined by the Government Office of Science as 'the process of looking for early warning signs of change in the policy and strategy environment'. It aims to identify emerging trends, explore how they may develop and combine, and to consider the views of a range of people (Government Office for Science, 2017, p. 27). Scenarios are often used to discuss these trends. They allow discussion of the interaction of various factors, as well as the role of 'discontinuities' and 'non-linear events' not captured in trends. While they are not intended as predictions, they can highlight the variability of outcomes, the scale of possible change, and allow policymakers to consider role of different factors in different settings. Scenario thinking is employed to weigh up the potential consequences of decisions or trends, and alternative

courses, rather than to 'predict' per se (Ramalingam & Jones, 2007, p. 6). Most of the ones found in this literature review take as their starting point statically generated trends (e.g. in demographics, climate, food supply, digital access) before analysing their implications and how they might play out in different policy and governance frameworks.

There are several different ways to approach forecasting and the closely related scenario thinking. According to a recent report, the latter may take several forms including the 'probabilistic modification of extrapolated trends' and the construction of scenarios as 'hypothetical sequences of events constructed for the purpose of focusing attention on causal processes and decision-points' (Avis, 2017). There are several methods of generating scenarios, dependent on which drivers of change are identified as the most important, who is generating the scenarios, and how they are validated, among other things (Government Office for Science, 2017; Ramalingam & Jones, 2007).

### 3. Conflict and the international system

#### International Humanitarian Law (IHL)

**ICRC (2019). *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts – Recommitting to Protection in Armed Conflict on the 70th Anniversary of the Geneva Conventions*; 10.2019; 500.**

[https://reliefweb.int/sites/reliefweb.int/files/resources/4427\\_002\\_IHL-Challenges-Contemporary-Armed-Conflicts\\_WEB\\_7.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/4427_002_IHL-Challenges-Contemporary-Armed-Conflicts_WEB_7.pdf)

This report outlines current and future changes to warfare that may challenge international humanitarian law (IHL)'s ability to protect civilians. It offers little in the way of specific predictions, but discusses the implications of new technologies and forms of conflict for IHL. Topics include:

- Cyber warfare, which could attack civilian infrastructure and particularly the health sector. Such attacks would be hard to attribute, and their effects would be hard to control (p. 26). The report suggests that misinformation and disinformation do not fall directly under IHL, although they could do if they took the form of 'spreading terror' (p. 28).
- Autonomous weapons systems are identified as having significant implications for IHL. They exist where a 'weapon system self-initiates, or triggers, an attack in response to its environment, based on a generalized target profile.' As such, they limit the element of human control over targeting, and thus raise clear ethical issues (p. 29).
- Artificial intelligence (AI) raises similar problems. It is defined as computer systems that do tasks 'that require cognition, planning, reasoning or learning.' In the report's words, 'algorithmically-generated analyses, or predictions, might also facilitate wrong decisions, violations of IHL and exacerbated risks for civilians' (p. 31).
- The report notes that weapons used in outer space could 'directly or incidentally disrupt, damage, destroy or disable civilian or dual-use space objects on which safety-critical civilian activities and essential civilian services depend' (p. 32).
- The report points out a more cross-cutting issue that reviewing new weapons for their IHL implications will be difficult, because they are harder to test as they are more complex and their effects less predictable (p. 35).

## International relations

**Chatham House (2018). *Chatham House Expert Perspectives: 2018 Risks and Opportunities in International Affairs*.**

<https://www.chathamhouse.org/publication/chatham-house-expert-perspectives-2018-risks-and-opportunities-international-affairs>

This report consists of short articles by experts on various potential geopolitical trends and risks in the near future. Many have only indirect implications for humanitarian action. **Most do not make predictions, but instead sketch out key risks and opportunities.** Articles include the role of the UK post-Brexit, multilateralism, the rise of armed groups, AI, contagion in cities, climate risk, and China's Belt and Road Initiative. A couple of articles have more direct implications for crisis response, such as **Jeff Crisp on refugees protection** which notes that the situation is dependent on political support and offers no specific predictions, or **Ruma Mandal's on China's attitude to international law** which suggests that the future of IHL is unclear, although it has been resilient in the past, or **Gareth Price on shared early warning systems for floods**. **Chanu Peiris's article on civil society** argues that 'if handled carefully, the greater involvement of private citizens through CSO schemes in this space can help build solidarity and support among the public for refugee protection' (p. 52).

**RUSI (2019). *The Future Conflict Operating Environment Out to 2030*.**

[https://rusi.org/sites/default/files/201906\\_op\\_future\\_operating\\_enviroment\\_web.pdf](https://rusi.org/sites/default/files/201906_op_future_operating_enviroment_web.pdf)

This report by the Royal United Services Institute for Defence and Security Studies (RUSI) provides an analysis of changing modes of conflict. It does not discuss implications for civilians or humanitarian operations. It focuses on non-Western schools of warfare: Russia (threshold), China (coercion and economic), Iran (proxy) and North Korea (brinkmanship), as well as terrorism. It suggests that 'the increasing use of military force is evident in all the approaches highlighted – not simply for deterrence and coercion, but as the core lever in furthering national ambitions'.

**Global Governance Futures (2020). *The New (Dis) Orders: Envisioning the Complex Futures of Geopolitics*.** <http://www.ggfutures.net/analysis/envisioning-the-complex-futures-of-geopolitics>

Scenarios have been developed from discussion workshops, including Global Governance Futures fellows (young professionals from the public, private, and non-profit sectors). They are based on focal questions (e.g. How will economic development and inequality play into the global order in 2030?; How will technology and multinational companies transform politics between nation-states?; To what extent will geography, regional politics and/or identity politics influence global order in 2030?) and using the following as variables: the relevance of Bretton Woods institutions,<sup>1</sup> the race to meet resource demands, the implications of domestic politics, technology bringing disruption, and the declining dominance of the US economy.

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<sup>1</sup> The institutions set up at the Bretton Woods Conference of 1944 to help manage the global economy, namely the International Monetary Fund and the World Bank.

The scenarios link economic development and the geopolitical order, suggesting trends in growth and prosperity, conflict and global governance.

Scenarios:

**Bipolar Order.** China does better than the United States in the trade war, undertakes measures to lessen the dollar's dominance, and leaves the IMF to set up a 'global stability mechanism' (GSM) instead. The GSM offers loans without political conditions and becomes particularly attractive to illiberal regimes. It also develops and shares surveillance technologies. The US encourages its allies to stay away from Chinese-led institutions as part of a 'velvet curtain', but many hedge their bets. China leads a global green new deal, based on Chinese-made technology and investment to lead the fight against global warming, leading many to ask 'is China the new benign hegemon in international affairs, succeeding the US in providing common goods to the international community?'

**Grand Development Bargain.** In this scenario, Europe cuts development aid to Africa and the US withdraws from international engagement. Africa, led by South Africa, seeks investment from digital technology companies. The development of new platforms and the uptake of digital technology by Africa's youth makes it a centre for Big Data collection. Biotech breakthroughs in Nigeria, and a free trade agreement across the continent, help transform Africa into a major digital and financial hub. The World Bank is undermined by lack of support and cyber attacks, and begins to be supplanted by private charitable foundations, who eventually take an equal share in the World Bank alongside sovereign states.

**Indo-Pacific and the New Great Game.** India grows to achieve near economic parity with China. Disputes over water, ports and territory increase. India, China and other countries outside the region win more representation in the Bretton Woods institutions and the UN Security Council, but this results in paralysis in many global governance institutions. There is increasing militarisation in South Asia, as India and a China-backed Pakistan dispute water resources. The EU, US and Russia can only act as 'balancing' powers in these disputes.

**The National Security, Military and Intelligence Panel on Climate Change (NSMIP) (2020). *A Security Threat Assessment of Global Climate Change How Likely Warming Scenarios Indicate a Catastrophic Security Future.***

[https://climateandsecurity.files.wordpress.com/2020/02/a-security-threat-assessment-of-global-climate-change\\_nsmip\\_2020\\_2.pdf](https://climateandsecurity.files.wordpress.com/2020/02/a-security-threat-assessment-of-global-climate-change_nsmip_2020_2.pdf)

The US NSMIP report seeks to outline the likely effects of climate change on global conflict and stability. It uses two scenarios: a 'near-term' future to 2050 based on a rise in global temperatures of 1-2°; and a 'medium to long-term' forecast for the period 2050-2100 based on a global rise of 2-4°C. It argues that we are already seeing climate-induced conflicts in places such as Lake Chad and Somalia (p. 66), although it is important to point out that the evidence on this issue is disputed (Mach et al., 2019; Peters et al., 2019).

It maps the likely consequences of these scenarios on different regions of the world, considering food, sea level, water availability, disasters, health, migration, existing security systems, and makes a 'threat assessment'. In the near-term scenario, the threat is assessed to be 'very high' in SE Asia, the Middle East, Africa and South America. Europe and North America will have

Medium-High threat levels. In the medium-long term scenario (2050-2100), all regions are assigned 'high catastrophic' or 'very high catastrophic' threat ratings. The near time scenarios will hit fragile states, small islands, and the arid Middle East worse. They will also raise the prospect of new conflicts e.g. over Arctic routes, and the potential for disputes over resources. This medium/long-term scenario includes the possible unintended consequences of geoengineering, more powerful disasters, and cascading disasters.

## 4. Risk landscape

### Disasters

**IFRC (2019). *The cost of doing nothing: the humanitarian price of climate change and how it can be avoided*. DOI: [10.1126/science.1214039](https://doi.org/10.1126/science.1214039).**

This report is focused on the risk of increased floods, drought, storms and wildfires brought about by climate change, and the responses of UN agencies, the Red Cross, and NGO responses in the short-term. It does not include other types of hazard such as conflicts, heatwaves, landslides or tsunamis. It also does not seek to discuss the potential effect of 'tipping points' in the climate system. It does not measure the role of governments in managing disasters. By leaving out other types of disaster, state disaster management or possible tipping points, the report's findings are, in its own estimation, 'likely to be underestimates'.

It outlines four scenarios, ranging from 10 million people needing help for climate-related disasters in 2050 in the most optimistic scenario to 200 million costing USD 20 billion in the pessimistic scenario. Currently, 108 million people need help because of floods, storms, droughts and wildfires.

The scenarios been derived from 'shared socioeconomic pathways' – projections of the rate and inclusiveness of growth, climate change, investment in adaptation, and development patterns. Projections are taken from sources including the World Bank's Shock Waves report; IFRC and UN data on the cost of responding to disasters; EMergency events DATabase (EM-DAT)<sup>2</sup> data on those affected by disasters; and projections of the numbers living under poverty lines, including the effects of climate on wealth levels (IFRC, 2019b). It works from the assumption that those living under USD 10 per day are unlikely to have the resources to cope with natural disasters, and therefore are likely to need humanitarian assistance.

**ODI (2013). *The geography of poverty, disasters and climate extremes in 2030*. <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8633.pdf>**

This ODI report combines climate, disaster and poverty projections on a global level to identify the countries that are likely to be most vulnerable to natural hazards by 2030. It has a wider focus than the IFRC's (see above) in that it includes the disaster risk management capacity of states more in its analysis.

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<sup>2</sup> Run by the Centre for Research on the Epidemiology of Disasters (CRED), University of Louvain.

The report argues that more research is needed into the exact income levels constitute 'vulnerability thresholds', and suggests that the figure is likely context-specific. It also notes, based on research in Ethiopia, that natural disasters can push people into poverty (particularly drought).

Countries identified as particularly at risk are: Bangladesh, Democratic Republic of Congo, Ethiopia, Kenya, Madagascar, Nepal, Nigeria, Pakistan, South Sudan, Sudan and Uganda. Risks and vulnerabilities are displayed in maps.

**UNDRR (2019). *Global Assessment Report on Disaster Risk Reduction*.**  
[https://gar.undrr.org/sites/default/files/reports/2019-05/full\\_gar\\_report.pdf](https://gar.undrr.org/sites/default/files/reports/2019-05/full_gar_report.pdf).

This report focuses on non-linear change and systemic risk, e.g. multiple bread basket failures. It argues that we need to assess and plan for risk differently, in line with the Sendai Framework. It does not offer any concrete forecasts, but does provide some discussion of current trends in risk management policy and spending.

**Foresight (2012). *Reducing risks of future disasters: Priorities for decision makers*. Final project report.**  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/286476/12-1289-reducing-risks-of-future-disasters-report.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/286476/12-1289-reducing-risks-of-future-disasters-report.pdf)

This report assesses current trends and likely drivers of future disasters. It argues that 'if not addressed, disaster risk will increase as a result of predetermined trends in the global environment and demography' (p. 38). Many of these trends are 'locked-in' by current structures, e.g. current demographic structures, whereas politics and policy are more amenable to change. According to the report, the following are likely to increase the risk of future disasters (pp. 29-30): environmental change; demographic change; conflict and stability; political and governance change; urbanisation; economic growth; globalisation, and technological change.

## Multi-sectoral changes and complex scenarios

**Ministry of Defence (2018). *Global Strategic Trends The Future Starts Today Sixth Edition*.**  
<https://www.gov.uk/government/publications/global-strategic-trends>

This is an extensive report, based on a wide literature review and academic analysis to identify trends and draw scenarios. It argues that the '**rate of change and level of uncertainty may outpace good governance and unity**' and that policymakers should emphasise '**strategic adaptability**' in future.

Trends are projected forwards, and 'future worlds' are used to show the implications of various scenarios. 'Watch points' are identified as turning points for likely scenarios, and '**discontinuities**'<sup>3</sup> are used to highlight potential Black Swans (hard-to-foresee, high-impact events), Black Jellyfish (known issues that turn out to be more complicated than expected), and

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<sup>3</sup> Non-linear events which could significantly disrupt projected trends.

Black Elephants (challenges visible to everyone, but which no one wants to deal with).

It identifies **six likely trends**:

- Increasing individual empowerment (medical advances, fewer communicable diseases, less absolute poverty);
- Shifts in power (growth of China, the decline of Western soft power, weakening of international laws, more decentralised hybrid governance);
- More data, cyberattacks, and better computer intelligence;
- New technology - gene editing, transport cheaper, automation, possibly leading to social upheaval;
- Climate change and environmental stress, bringing disruption to transport, flooding, food and water shortages, and
- Population growth, the ageing of many societies, migration, and urbanisation.

The themes are environment and resources; human development; economy, industry and information; governance and law; conflict and security. It discusses **four scenarios** ('future worlds') for each of the five themes: **multilateralism; multipolarity; network of actors; and fragmentation**.<sup>4</sup> It also looks highlights possible discontinuities, such as: a world war, an automation-driven financial collapse, a global pandemic, an ideological revolution on the scale of the sixteenth-century Reformation, etc. Each of these scenarios are discussed in detail, and implications are drawn for policymakers. It also includes a global stress map and regional profiles.

**World Economic Forum (2020). *The Global Risks Report 2020 Insight Report 15th Edition*. <https://www.weforum.org/reports/the-global-risks-report-2020>**

This report covers a broad range of risks in the near future and some discussion on potential implications. A global risk is defined as 'an uncertain event or condition that, if it occurs, can cause significant negative impact for several countries or industries within the next 10 years.' It has little on specifically humanitarian implications.

It is based on 2018/19 data, and reviews of academic, NGO, UN sources, and perceptions of business, civil society and academic leaders (unnamed). The leaders' perceptions have been used to create a ranking of risk perceptions for 2020 and the coming years.

Risks are grouped into economic fragility and social cohesion; the threat from climate change; the risk of biodiversity loss; digital fragmentation, and increased pressure on health systems. Risks from climate are seen as the most likely to occur and the highest impact.

The report suggests that:

- Trade tensions, social inequality and political polarisation are significant risks based on current trends.
- 'Climate and corresponding economic risks threaten a 2008-style systemic collapse, unless net human-caused carbon dioxide (CO<sub>2</sub>) emissions fall by 50% by 2030 relative to 2010, and to net zero by 2050' (p. 34).

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<sup>4</sup> Based on two axes: whether there will be more cooperation or competition between governance actors, and whether power will remain with states or be diffused to a wider range of actors.

- Biodiversity loss threatens, food security, clean air, could exacerbate climate change, as well as specific plants and animals needed for medicine. The losses could be equivalent of significant proportions of global wealth.
- Opportunities and risks from new digital technology include precision medicine, automated vehicles, artificial intelligence, but also cyberattacks, threats to data security, loss of jobs, and fragmentation between different protocols and technology frameworks.
- Health risks include increasing drug resistance, vaccine hesitancy and a lack of will to tackle diseases, increased vulnerability to pandemics, more non-communicable diseases, threats to social cohesion (e.g. from the costs of ageing societies), and health risks from climate change.

**FAO (2018). *The future of food and agriculture – Alternative pathways to 2050*.**  
<http://www.fao.org/3/I8429EN/i8429en.pdf>

This Food and Agricultural Organization report uses data projections under three scenarios to outline the possible outcomes of trends in food production on patterns of nutrition and conflict globally. It starts from the view that the 'current trends are calling into question the economic, social and environmental sustainability of food and agricultural systems' (p. 3). It identifies several current trends: more population, income and urbanisation growth, putting more pressure on food, resource-intensive animal products and processed food; persistent poverty and inequality; increased pressure on land from population growth and urbanisation; technological change in agriculture (especially in less productive regions) not keeping pace, and climate change reducing yields.

The three scenarios are based on global responses to climate change, agriculture and cooperation:

- **Business as usual:** we fail to address problems, leading to more conflicts, climate change, a failure to achieve the sustainable development goals (SDGs), and more demand on land.
- **Towards Sustainability:** there is more equity of access to services; successes in SDGs; better energy; more efficient agriculture, and less conflict.
- **Stratified Societies:** elites protect themselves and there is little common action on climate, food etc.; this leads to conflict over resources; a lack of access to services for poor; and more inequalities.

**Benton, T.G. (2019). Using scenario analyses to address the future of food. *EFSA Journal*, 17(S1), 1–13.** <https://doi.org/10.2903/j.efsa.2019.e170703>

Analysis starts from the premise that the current food system is built around supplying cheap food, and based on 'just-in-time' production and extended supply chains. Agriculture contributes significantly to greenhouse gas emission, and the current mode of consumption also leads to high levels of obesity and related problems.

The report seeks to consider how food systems may change. Starting from the view that 'the world is highly non-linear, stochastic and complex', it sketches four brief scenarios. They are based on two axes: how food is produced and distributed (locally or globally), and how it is consumed (healthy and sustainable or unhealthy and unsustainable). **The scenarios therefore have implications for global health, climate change, and international competition.**

The four scenarios are:

- **Unchecked consumption in a globalised world.** Described as a 'business-as-usual' scenario, wherein population growth and continued demand for processed food is met with increasing intensive production concentrated in a few crops. This increases the negative effects of agriculture on climate change, which in turn reduces yields. Agriculture is increasingly large-scale and reliance on high-tech systems and biotechnology.
- **Sovereign (in)sufficiency.** Populism sees states withdraw from global trade in food, while still trying to maintain cheap food supplies and to meet consumer demand. There is an overall loss of efficiency from global trade, however. Countries focus on their commodity crops and agriculture becomes more intensive and continues to drive climate change. Individuals' diets are increasingly made up of food grown within their country. The unequal distribution of agricultural endowments and population means that countries compete to control land and access to food.
- **Global, green and healthy.** In this scenario, 'globalised cooperation works.' Global supply chains remain long, but governments work to promote healthcare (less consumption) and nutrition is added to food during processing, without using too much sugar and fat. Governments also promote climate mitigation policies. New, 'smart' urban intensive agriculture becomes more widespread.
- **Localised and sustainable.** In this scenario, we see a 'world of circular food systems, diversified to provide healthy diets in more isolated regional food systems'. Diets are more seasonal and local. The food system is more environmentally friendly. Food prices reflect the costs of production, food is less plentiful and processing more expensive, so more people prepare food at home, and eat less. However, there is more between-country inequality, leading to tensions and regional trading blocs.

**Global Governance Futures (2019). *Re-Imagining Forced Migration Governance for 2030.***  
<http://www.ggfutures.net/analysis/re-imagining-forced-migration-governance-for-2030>

The scenarios are the product of workshop discussions by Global Governance Futures fellows from the public, private, and non-profit sectors. Accounting for key trends and uncertainties, the group created two scenarios:

- **Broken telephone.** Focused on South Asia, the scenario looks at how vulnerable groups are affected by misinformation. Increased access to digital technology combines with nationalism and misinformation to lead to the targeting of Muslims in India, refugees fleeing persecution, and the fanning of global tensions over the issue. The global refugee regime is found to be inadequate.
- **Together.** Forced migration continues to spread. In this scenario, 'a new international platform of shared responsibility for the forced migration challenge will be initiated by forced migrants themselves' in which, cities, the private sector and social entrepreneurs rather than states become the main actors. They form the 'Together Framework', and provide toolkits for cities and other local actors to help migrants, which is relatively successful.

Yayboke, E.K., & Gallego, C.G. (2019). *Trends in Forced Migration: CSIS Backgrounder*. <https://www.csis.org/analysis/trends-forced-migration>

This report discusses the prospects for the global governance of forced migration. It discusses future trends, based on UNHRC and International Organization of Migration data, and contemporary case studies, to identify key challenges. It does not offer sustained predictions, but is more focused on current problems, pointing to causes of forced migration and current policy responses by the main actors.

The global challenges likely to exacerbate forced migration include: strains in host countries (Turkey, Lebanon etc.); more money being given in donor countries to refugees, and less to poorer countries; resistance to refugees; the US withdrawal from global migration compacts (Global Compact on Refugees (GCR) and the Global Compact for Safe, Orderly and Regular Migration (GCM). It discusses the positions of great powers on migration.

It offers three hypothetical scenarios for 2030, based on different international systems (pp. 39-40):

- **Confront the crisis, address root causes, strengthen the rules-based international order, and reduce the flow of forced migration over the medium term.** US leadership helps to address refugee-generating conflicts and solutions are found to integrate refugees across the world.
- **Muddle through, treat forced migration as a humanitarian crisis only, react to the issue ad hoc, and put the rules-based international order under great strain.** Key actors only address refugees as security and humanitarian issues, and do not seek broader solutions. OECD governments divert foreign aid spending to refugee assistance within their borders. Some overburdened countries in the global south collapse.
- **Stand by while chaos ensues.** Forced migration increases. There is little global cooperation and countries only seek to treat the symptoms of refugee crisis, or to close their borders and ignore international obligations. A number of fragile or poorer countries collapse under the strain.

Watts, N. *et al.* (2019). 'The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate'. *The Lancet*, 394(10211), pp. 1836–1878. doi: [10.1016/S0140-6736\(19\)32596-6](https://doi.org/10.1016/S0140-6736(19)32596-6).

This report is focused on 2018/2019 indicators on the effects of climate change on health, and efforts to curb climate change, rather than projections. Nevertheless, trends can be derived for the near future. **The report is based on detailed data from across the world discussing links between climate change and health.** The section on 'preparedness' discusses adaptations needed from policymakers.

The report outlines indicators posing credible scientific risk to public health across the globe. It is based on a wide range of academic literature. The health effects of climate change will be widespread, although the worst effects will be concentrated in poorer countries. The report is based on current trends rather than making specific predictions, although future scenarios can be inferred from the trends in climate and the information on climate mitigation and preparedness. Points of note include:

- '[V]ulnerability to extremes of heat continues to rise among older populations in every region of the world' (p. 1841)
- '[H]uman populations are concentrated in the areas most exposed to warming, experiencing a mean summer temperature change that is four times higher than the global average'
- 152 of 196 countries saw an increase in annual daily population exposure to wildfires in 2015–18, compared with in 2001–04...[this] not only poses a threat to public health, but also results in major economic and social burdens in both high-income and low-income countries' (p. 1842)
- Floods and drought have increased
- The 'suitability for disease transmission has increased for dengue, malaria, V cholerae and other pathogenic Vibrio species'
- Global crop yield potential has decreased

Its section on 'preparedness' synthesises policy responses from around the world, on issues including carbon pricing and disaster preparedness. It suggests that 'recognition of the need for health adaptation to climate change is widespread, and development planning is underway'.

**Global Preparedness Monitoring Board (2019). *A world at risk: Annual report on global preparedness for health emergencies.***

[https://apps.who.int/gpmb/assets/annual\\_report/GPMB\\_annualreport\\_2019.pdf](https://apps.who.int/gpmb/assets/annual_report/GPMB_annualreport_2019.pdf)

This report highlights the risk of pandemics and outlines what institutions should do to prepare. It points to 'a new era of high-impact, potentially fast-spreading outbreaks that are more frequently detected and increasingly difficult to manage' and argues that the world is not prepared for a pandemic (p. 12). This is because of increasing interconnectedness, a lack of trust in institutions in some regions (e.g. anti-vaccination sentiment), the possibility of engineered pathogens being deliberately or accidentally released, and the persistence of weak health systems in some places. It does not provide predictions, rather an analysis of current trends and their likely implications. It is based on current data on epidemics and pandemics, and assessment of countries' state of preparedness.

## 5. Humanitarian response and stakeholders

### Humanitarian architecture

**IARAN (2017). *'The Future of Aid: INGOs in 2030'*.**

[https://reliefweb.int/sites/reliefweb.int/files/resources/The\\_Future\\_Of\\_Aid\\_INGOs\\_In\\_2030-20.compressed.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/The_Future_Of_Aid_INGOs_In_2030-20.compressed.pdf).

This report forecasts likely changes in global governance and crises, and how humanitarian action could respond. It suggests the following types of crisis by 2030 and whether they are likely to increase, decrease or persist (pp. 21-24): large scale involuntary migrations; state fragility; persecution of minorities; sudden onset disasters; epidemics; man-made destructive events; ecosystemic crises; protracted denial of service crises; economic crises in middle and high income countries. It analyses the possible adaptations of INGOs in terms of collaborating with other actors and internal changes in business models, and sketches five 'organisational profiles' (pp. 27-37).

It outlines four scenarios for the place of humanitarian sector in a changing world:

- **Narrow gate:** characterised by decreased global governance and the politicisation of crisis, more pressure on minority groups in some contexts, growing levels of forced migration, and less space for INGOs to operate. INGOs are involved in more partnerships with governments, local NGOs and faith-based organisations, although they still maintain valued technical expertise.
- **Overflow:** the withdrawal of global governance, a dramatic escalation in humanitarian needs worsened by climate change; increased migration; crises are regional not local, making it hard for INGOs to help, and leading to more funds being given to militaries or faith-based organisations instead.
- **To each their playing field:** protracted, localised crises and increased large-scale involuntary migration; new actors including charitable foundations, cities and citizen movements coalesce into networks of thematic interest, not necessarily aligned with need, meaning some contexts are neglected. The aid system is fractured.
- **Revolutions:** characterised by 'the establishment of a new and more diverse system of international governance, driven by self-regulation and built organically through the institutionalisation of formal interactions between rising actors and networks'. The system addresses ecosystemic crises and growing needs in a more systematic way.

The issues likely to determine key changes were identified through structural analysis. Extensive appendices, based on data on current trends, include discussions on projected global changes, (demography, urbanisation and its stakes around the world, poverty around the world, climate change, food and agriculture, violent conflict, terrorism, international legal framework, and technology); crises (political instability, new waves of nationalism, the resurgence of sovereignty, political centrality of humanitarian crises, disasters incurred by natural hazards, epidemics, large-scale forced migration and the increased scale of humanitarian crisis); and changes in the humanitarian sector (acceleration of alliances; federation of NGOs; rise of faith-based NGOs; trends in humanitarian worker; private companies and foundations; the militarisation of aid, and donors of tomorrow).

**Kent, R. (editor) (2016). *Planning from the future: is the humanitarian system fit for purpose?***

[http://www.planningfromthefuture.org/uploads/4/5/6/0/45605399/pff\\_report\\_uk.pdf](http://www.planningfromthefuture.org/uploads/4/5/6/0/45605399/pff_report_uk.pdf).

This report is focused on how the humanitarian system can respond to contextual challenges, rather than analysis of these challenges itself (ageing and urbanisation, vulnerability from globalisation, internal wars, state fragility, more non-Western actors, more state management of disasters, as well as changes in delivery through technology or changed paradigms). It suggests that **new threats will be cascading and simultaneous**. Humanitarians will need to collaborate with a wider range of actors (p. 57).

It highlights changes in the humanitarian system, such as more market based aid; increased use of insurance; better nutrition support; the need for more protection, and new communications technology. The report suggests that more countries will be able to manage their own emergencies, and that power in the humanitarian system will shift as countries such as China or Islamic countries may operate on different lines to the current Western-led system.

**Kent, R. (2018). *The future of humanitarianism*. (November), 1–7. [http://alternatives-humanitaires.org/wp-content/uploads/2018/11/AH\\_N9\\_5\\_Transitions\\_Kent\\_VEN.pdf](http://alternatives-humanitaires.org/wp-content/uploads/2018/11/AH_N9_5_Transitions_Kent_VEN.pdf)**

This short article argues that the humanitarian sector needs to change to deal with more complex crises. It calls for far greater attention to be given to anticipating crisis drivers and their potential impacts, greater collaboration between actors in different fields and regions, greater capacity to monitor potential threats, and innovative approaches for dealing with them on a global basis. It calls for a greater range of actors in the humanitarian sector, including private companies and those with technological expertise.

It lists the following large-scale risks: bio-engineered pandemics and global catastrophes; global indebtedness and synchronous failure; cybernetics and cyber catastrophes, and displacement as a violent continuum.

It suggests that crises of the future will be larger on scale: 'when it comes to crisis drivers and impacts, conventional distinctions such as those between “developed” and “developing” countries will be conceptually less relevant; and, that a more appropriate focus will be on ways that any single event triggers multiple and complex reactions globally and without predictable timelines' (p.6). As a consequence, donors will respond less a matter of charity, more of security, solidarity and self-protection as disasters will affect everyone.

**Kirshbaum, J., & Gonsalves, A. (2019). *The Future of Skills in the Humanitarian Sector*. [https://www.humanitarianleadershipacademy.org/wp-content/uploads/2019/10/Future-of-Skills-in-the-Humanitarian-Sector-Report\\_4MB.pdf](https://www.humanitarianleadershipacademy.org/wp-content/uploads/2019/10/Future-of-Skills-in-the-Humanitarian-Sector-Report_4MB.pdf)**

The report is based on interviews with field workers in Jordan and the Philippines.

It briefly outlines trends in the humanitarian sector based on secondary literature: climate change and natural disaster, famine and food security, protracted displacement and computational crises. With each of these it suggests several promising solutions which may help improve humanitarian response, including the London Centre for Global Disaster Protection insurance for natural disasters, or several technological solutions such as the World Food Programme's use of blockchain. It also outlines potential disruptions (p. 31): changes brought about by increasing localisation and fewer intermediaries in the delivery of aid; the shift of economic and political power as China rivals the US and some recipient countries no longer need aid; better disaster risk management; shifts in communication and information dissemination; changes to funding; and changes to the monitoring and evaluation of aid, such as reporting by beneficiaries.

The focus of the report is new skills that humanitarian workers are expected to need. These include: juggling roles to deal with insecure work; working to counter false information; 'Being able to quickly design and implement lightweight coordination structures, both in terms of software and group process methods, to route people and resources effectively'; maintaining relationships through digital communications media; reporting qualitative feedback using VR; a cultural shift that sees less power concentrated in White men from the global north; the need for 'organisational wayfinding' as new actors become more prominence; more focus on building resilience alongside recovery from disasters as climate change occurs; navigating technological ethics; balancing privacy with donor demands for data; facilitating bottom-up community networks and communications.

**Humanitarian Futures. (2010). *Humanitarian crisis drivers of the future: preparing now for what might be.* <https://www.humanitarianfutures.org/wp-content/uploads/2017/10/Crisis-Drivers-Synthesis-Report-Final.-21Jan10.pdf>**

The project was based on literature reviews and interviews to identify drivers, as well as workshops to discuss the drivers, and their potential implications in different contexts. Those interviewed included a range of scientific experts from several disciplines and political figures from China, India, Russia, the US and the UK.

It sees systematic, synchronous crises as increasingly likely. Vulnerability will become an issue for governments and NGOs, and humanitarian concerns will become core. The report argues that the crises will become larger because of increased complexity brought about by:

- **Technological failures**, including cybernetic systems collapse and radioactive leakages. Technological failures can drive large-scale crises, but also hinder humanitarian responses.
- **Miscalculated policy interventions**, including carbon captures underground triggering an earthquake, or water transfer projects to solve one shortage but that create larger problems.
- **The velocity of change**, meaning the 'sheer rapidity of socio-economic and political transformations combined with scientific discovery and technological innovation is proving in many instances beyond governmental capacities to understand or adequately respond to their potential consequences', as well as governments' to address low-probability, high-impact events.
- **Non-sustainable livelihoods**, including the over-exploitation of resources.

It also points to **population growth, demographic shifts and climate change, water availability, intensive pollution and new diseases** as other processes likely to drive crises.

The report centres on three indicative crisis drivers:

- **Waters of the third pole** (water supply in the Himalayas to the surrounding population centres in Asia). The scenario considers potential flooding, shortages, pollution and other effects on the glacial water originating in the Hindu Kush-Himalayan (HKH) region. The report notes that the water supply is already being affected. Most in the workshops felt that 'the growing population and population density would mean a significant shift in the scale of affected populations'.
- **The collapse of water and sanitation capacities in ever more crowded urban areas.** Given projected increases in urban populations, a percentage of which will live in slums, water and sanitation will be an increasing problem. It can lead to diseases, corruption and criminality, and conflict and political violence. It was noted that projections of urban growth were not certain to be fulfilled - there might be urban-rural migration if cities became more polluted and crowded, for instance.
- **Global pandemics.** The report states that pandemics have the potential to have significant health, economic, social and political effects. It notes that pandemics are often viewed as a health issue, and the cascading effects are not always sufficiently considered.

It discusses the implications of these high-impact large-scale crises for disaster management, discussing assessment of plausibility, implications and capacity to respond with experts in crisis management from different parts of the world (Russia, China, India, the UK, the US).

It sketches out two scenarios. First, **Scarcity, pollution and conflict in a Far East Asian context: 2025-2030**, wherein China fails to manage its water and agriculture sustainably, putting more strain on food and water supplies. China and India implement water diversion and dam projects, severely threatening the livelihoods of whole countries downstream (Bangladesh, Cambodia, Laos, Vietnam). Second, **a new strain of influenza develops in the Sao Paulo slums**, before quickly spreading to hundreds of millions across the world, killing 140 million and costing around 20% of global wealth.

## Humanitarian principles

**Donini, A. (2019) *The end of impartiality? The future of humanitarian action: Reflections on impartiality*. [https://www.chaberlin.org/wp-content/uploads/2019/02/humhilfe-studie-unparteilichkeit\\_2018\\_Donini\\_EN.pdf](https://www.chaberlin.org/wp-content/uploads/2019/02/humhilfe-studie-unparteilichkeit_2018_Donini_EN.pdf)**

The article does not offer predictions, instead suggesting that its method is 'behindology'. It seeks to understand how the humanitarian system might respond, to fail to respond, to challenges.

In diagnosing the current system, Donini argues that it is no single force or power, and 'what keeps the system (somewhat) together is its network power.' He suggests that the current system is overburdened by bureaucracy, that current funding is determined by donor preference not need, and that there are notable failures to help or protect many in warzones as well as migrants. Regarding the prospects for change in the current system, he is pessimistic and points to a lack of agreement at international summits and little energy for multilateralism. He predicts the humanitarian system is unlikely to be able to cohere for crises/prevention, climate change etc.

Noting that the humanitarian system is shaped by how funds are raised, he argues that change is inevitable. The current system is already vulnerable to political pressures. In the near future, the 'system' could be starved of funds (eg Western populists) or bypassed (e.g. Turkey, China etc). With regards to the latter, 'It is not inconceivable that China, and, later perhaps, India, building on the strength of their economy, will use the range of tools in the humanitarian handbook including their soft power to extend their influence to new areas, as the west has done in the past'.

The article concludes with the thought: 'Is the best we can hope for a smaller, more focused Western humanitarian system surrounded by an array of different approaches to saving and protecting lives? Perhaps a 'multiversal', loosely connected (eco) system?'

## Modes of assistance

**IARAN & CaLP (2019). *The Future of Financial Assistance: An Outlook to 2030*. <https://www.alnap.org/help-library/future-of-financial-assistance-report>.**

The report argues that financial assistance will be central to shifts to more self-management of response by recipients by 2030. It identifies several areas to focus on when considering the links between cash assistance and humanitarian aid: working with other forms of financial assistance and actor; evaluation of outcomes; data responsibility; helping migrants; how to maintain trust,

and how to ensure users' voice.

The report identifies the following drivers of the evolution of financial assistance: 'the role of the private sector, the role of crisis-affected country governments, mobile technology and internet access, ID and its digitization, data and data protection, the use of financial services by crisis-affected people, funding levels for financial assistance, and population movement'. It unpacks the significance of these drivers and the key questions raised about aid efficacy, humanitarian actors, etc.

Based on these drivers, the report outlines four scenarios for the future of cash assistance:

- **Control:** government led and regulated; not always needs driven.
- **Chaos:** lots of transnational remittances; little coordination; focus on sudden-onset disasters; a digital divide leading to unequal access and a lack of trust in systems.
- **Emergence:** new localised networks in the private sector and government, and few common standards. This provides more options for users, but also more norms, making co-ordination harder and creating the possibility of parallel systems.
- **Synergy:** common standards and principles allow for collaboration between private and public actors, and lots of entry points for users.

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## Key websites

- Global Public Policies Institute, Global Futures reports, <https://www.gppi.net/2019/05/10/the-world-in-2030-ggf-reports>
- Humanitarian Futures: <http://www.humanitarianfutures.org/>

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*This report is based on twelve days of desk-based research. The K4D research helpdesk provides rapid syntheses of a selection of recent relevant literature and international expert thinking in response to specific questions relating to international development. For any enquiries, contact [helpdesk@k4d.info](mailto:helpdesk@k4d.info).*

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