United Nations Office for Disaster Risk Reduction

GAR

DISTILLED

2019

Global Assessment Report on Disaster Risk Reduction

United Nations

GAR19 Distilled

The **United Nations Office for Disaster Risk Reduction (UNDRR)** works with thinkers, practitioners, experts and innovators to investigate the state of risk across the globe, highlighting what's new, spotting emerging trends, revealing disturbing patterns, examining behaviour and presenting progress in reducing risk. The findings make up the **Global Assessment Report on Disaster Risk Reduction (GAR)**, which is published every two years.

GAR is known for breaking new ground on risk and its reduction – challenging prevailing norms and provoking us all to re-examine our behaviour and our choices. While disaster risk has been the point of departure, it is clear that in an increasingly connected world, nothing about risk is siloed. We can't afford to be narrow in our definition of risk, or in the way we address it.

Correspondingly, the latest **GAR** (GAR19) moves beyond disaster risk to consider the pluralistic nature of risk: in multiple dimensions, at multiple scales and with multiple impacts. It provides an update on how we – as governments, as communities and individuals – understand our relationship with risk and its reduction.

It provides the first update from countries on progress against the seven targets of the **Sendai Framework for Disaster Risk Reduction 2015–2030 (Sendai Framework)**: the global guide to understanding and dealing with risk, and places special emphasis on the **2020 Target (e) -** Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.

GAR19 Distilled collates 10 take-home observations from **GAR19**. These observations should provoke us to re-examine what and how we think about risk – the issues and our corresponding actions. Each observation is linked to the relevant section in the **GAR19** main report, so you can dive in as deeply as you like.

"If I had to select one sentence to describe the state of the world, I would say we are in a world in which global challenges are more and more integrated, and the responses are more and more fragmented, and if this is not reversed, it's a recipe for disaster."

António Guterres, United Nations Secretary-General, January 2019


Where we are
Destructive
Compliant
Risk-informed systems-based approaches and decision-making
Sustainable
Where we need to be
Regenerative
Proactive
Effective
Reactive
Survival
DISASTER
MANAGEMENT
DISASTER
RESPONSE
RISK
PREVENTION
LIVING WITH
UNCERTAINTY
Evolving
Containment
Aligned
Efficient
DISASTER
MANAGEMENT
RISK
PREVENTION
LIVING WITH
UNCERTAINTY
DISASTER
RESPONSE
DISASTER
Integrated
Enabling

Surprise is the new normal

ISSUE

Our planet, circumstances, needs and choices have always evolved and changed. Risk is part of our collective human experience. Ironically, in this age of data, information and connectivity, even though we can quantify more of what was previously uncertain, it makes apparent how much more we don't know. What is evident, is that change is happening more quickly and surprisingly across multiple dimensions and scales than we ever thought possible.

This means that although modelling and metrics are important, we can no longer use the past as a reliable indicator of the future. For example, risk analyses typically produce values that are economically derived around the expected cost of specific disaster types. These analyses are commonly based on hazard patterns, exposure patterns and measures of vulnerability that are being outpaced by reality on a daily basis. Moreover, new risks and correlations are emerging in a way that we have not anticipated. Threats that were once considered inconceivable, no longer are.

There will be greater uncertainty with which we must contend. Uncertainty and surprise create discomfort (we humans crave control), but also opportunity. Although difficult, accepting uncertainty and understanding that we cannot presume to control all change is imperative. It is also a more honest description of the world beyond simplified metrics. This acknowledgement must shape behaviour to come. Extreme changes in planetary and socioecological systems are happening now; we no longer have the luxury of procrastination. If we continue living in this way, engaging with each other and the planet in the way we do, then our very survival is in doubt. Such challenges can seem insurmountable. Uncertainty can lead to paralysis, further compounding risk.

ACTION

There are clear actions we can take – as countries, communities, individuals and organizations. We must act collectively. The Sendai Framework sets out an agreed global blueprint for addressing risk. We must avoid creating new risk, and we must systematically reduce existing risk. We must strengthen the capacity of people, communities, countries and systems to withstand and bounce back from shocks, persist through stresses and transform through crises.

We must anticipate and allow room to deal with surprise and non-linear change with flexibility and nimbleness in our strategies and plans. We must be able to make real-time adjustments that anticipate and respond to change when pursuing economic activity and sustainable development. This means adaptive, anticipatory planning frameworks that seek to identify the drivers of risk across systems to prevent and mitigate risk, and that allow implementers to react quickly, with funding decisions made as close to the ground as possible. Our flexibility must be as dynamic as the change we hope to survive.

We must apply what we know and acknowledge the gaps in our knowledge, prioritizing ways to understand what we do not yet know. Above all, we cannot let inertia and short-sightedness impede action. We must act with urgency and with greater ambition, proportional to the scale of the threat.

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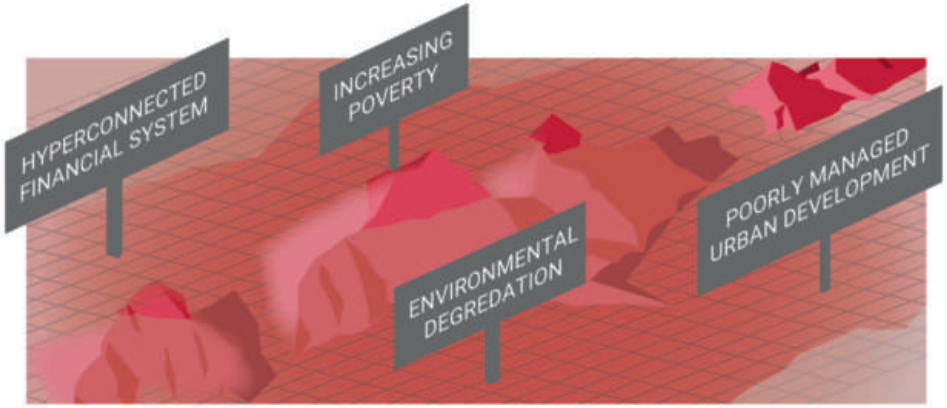
Realization of risk

Context

Driven by



Growing risk in a shrinking world

ISSUE

Change does not happen in silos or in straight lines. Non-linear change brings new threat patterns; the variables that control our future are in flux. The choices we make are creating new, emerging and larger risks. Human activity grows exposure, increasing the propensity for systems reverberations, setting up feedback loops with cascading consequences that are difficult to foresee.

Data and analytics (and news headlines) tend to compartmentalize risk, to make it seem simple and quantifiable. This is dangerous. A focus on numbers – particularly numbers linked to single extreme events such as tsunamis or pandemics – emphasizes direct short-term consequences. This means that we routinely fail to correctly understand and portray risk, particularly its longitudinal impacts. For example, beyond direct impacts, little analysis exists of the decadal consequences on well-being and the development aspirations of countries, provinces or cities where disasters have destroyed schools and killed schoolchildren.

With increasing complexity and interaction of human, economic and political systems (e.g. the international financial system, communications and information technology, trade and supply chains, megacities and urbanization) and natural systems (marine, land and air), risk becomes increasingly systemic.

Think of climate change due to global warming that is now contributing to environmental degradation and biodiversity loss with corollary impacts on crop yields and food production, international trade, financial market volatility and political instability. Or NATECH disasters where for example an extreme weather event realizes a "hidden" technological risk, causing the partial or full disabling of a national power grid with cascading impacts on business continuity, critical infrastructure and civil security, or disruption of basic services.

ACTION

The era of hazard-by-hazard risk reduction is over. We need to reflect the systemic nature of risk in how we deal with it. We need to improve how we tune our understanding of anthropogenic systems in nature to identify precursor signals and correlations to better prepare, anticipate and adapt.

This means we must move away from working on distinct areas of risk (e.g. spatial, geographic, temporal, disciplinary) when designing and implementing interventions. While it can be practical to categorize risk so that we can delegate responsibility to different organizations, institutions or individuals, we need to incentivize transdisciplinary integrated, multisectoral risk assessment and decision-making to improve efficiency, reduce duplication of effort and allow for connected, collective action.

This is particularly critical at national government level. Risk must not be departmentalized. National planning bodies with representation from all sectors must be convened to develop national disaster risk reduction strategies that assume an all-of-State institutions approach to risk reduction. A process to develop a Global Risk Assessment Framework (GRAF) has already been established to facilitate generating the information and insights that would sustain and guide this kind of effort. Sustained, multi-year and creative funding and collaboration is needed so that State organs and leaders have the tools they need to better recognize systemic risks and apply funded, sustainable risk management strategies – at all scales.

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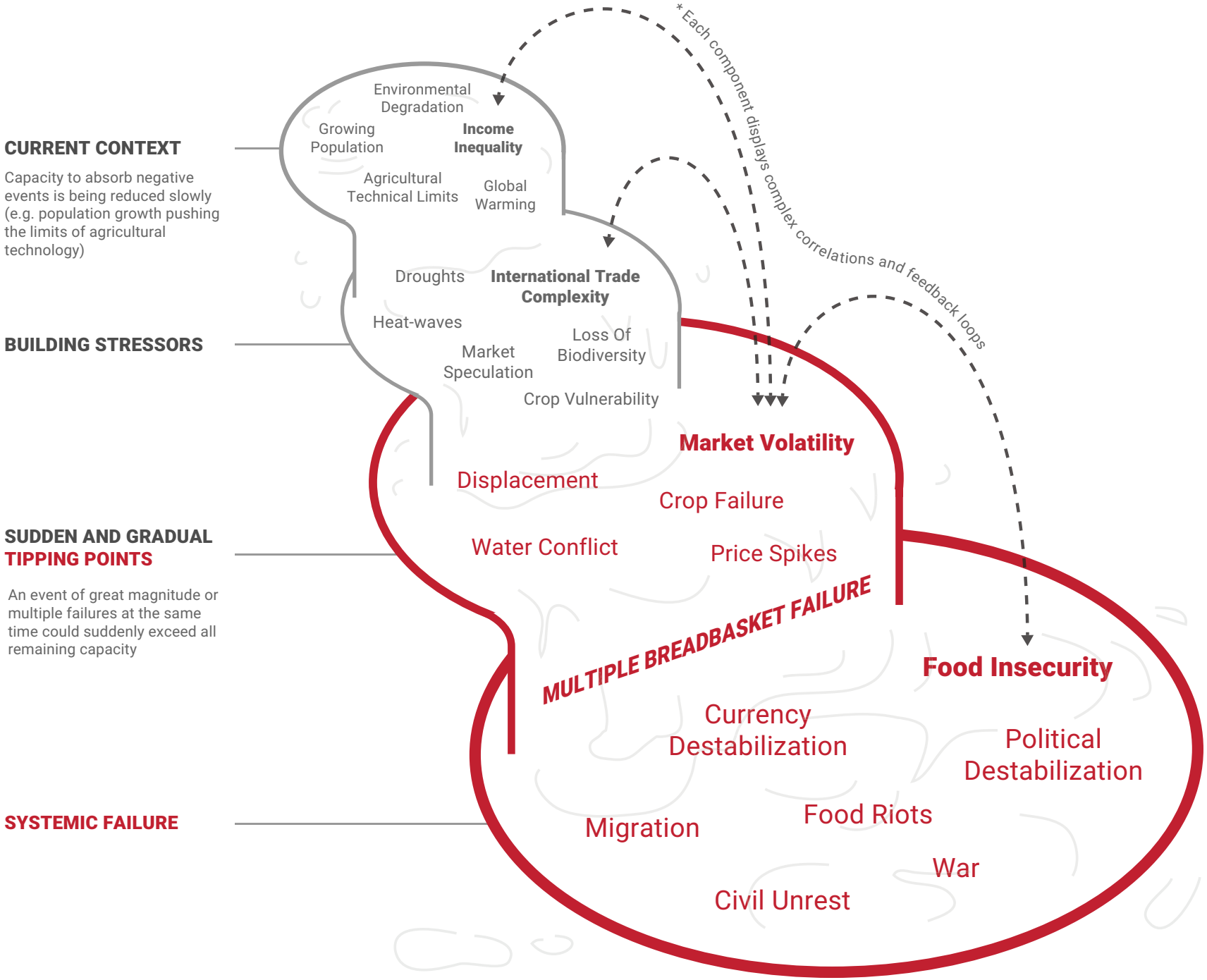
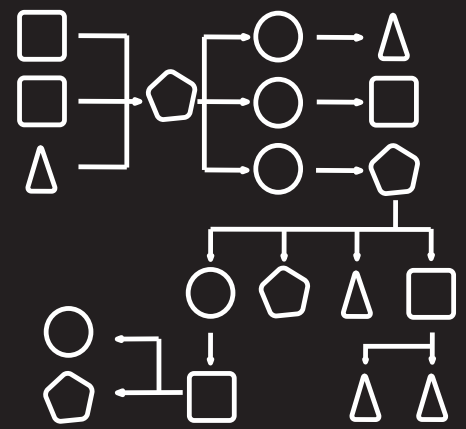

CURRENT CONTEXT
Capacity to absorb negative events is being reduced slowly (e.g. population growth pushing the limits of agricultural technology)
BUILDING STRESSORS
SUDDEN AND GRADUAL TIPPING POINTS
An event of great magnitude or multiple failures at the same time could suddenly exceed all remaining capacity
SYSTEMIC FAILURE
* Each component displays complex correlations and feedback loops
Environmental Degradation
Growing Population
Income Inequality
Agricultural Technical Limits
Global Warming
Droughts
International Trade Complexity
Heat-waves
Loss Of Biodiversity
Market Speculation
Crop Vulnerability
Market Volatility
Displacement
Crop Failure
Water Conflict
Price Spikes
MULTIPLE BREADBASKET FAILURE
Food Insecurity
Currency Destabilization
Political Destabilization
Migration
Food Riots
War
Civil Unrest

It’s complex – let’s deal with it

ISSUE

Understanding risk means understanding what we know, what we don’t know, and even trying to tackle what we know we don’t know. Risk is complex. We need to understand how to deal with it without resorting to reductive measures that isolate and ignore the systemic nature of risk. We must push back against institutions, governance approaches and research modalities that treat risks in isolation and outside of their socioecological and socioeconomic contexts.

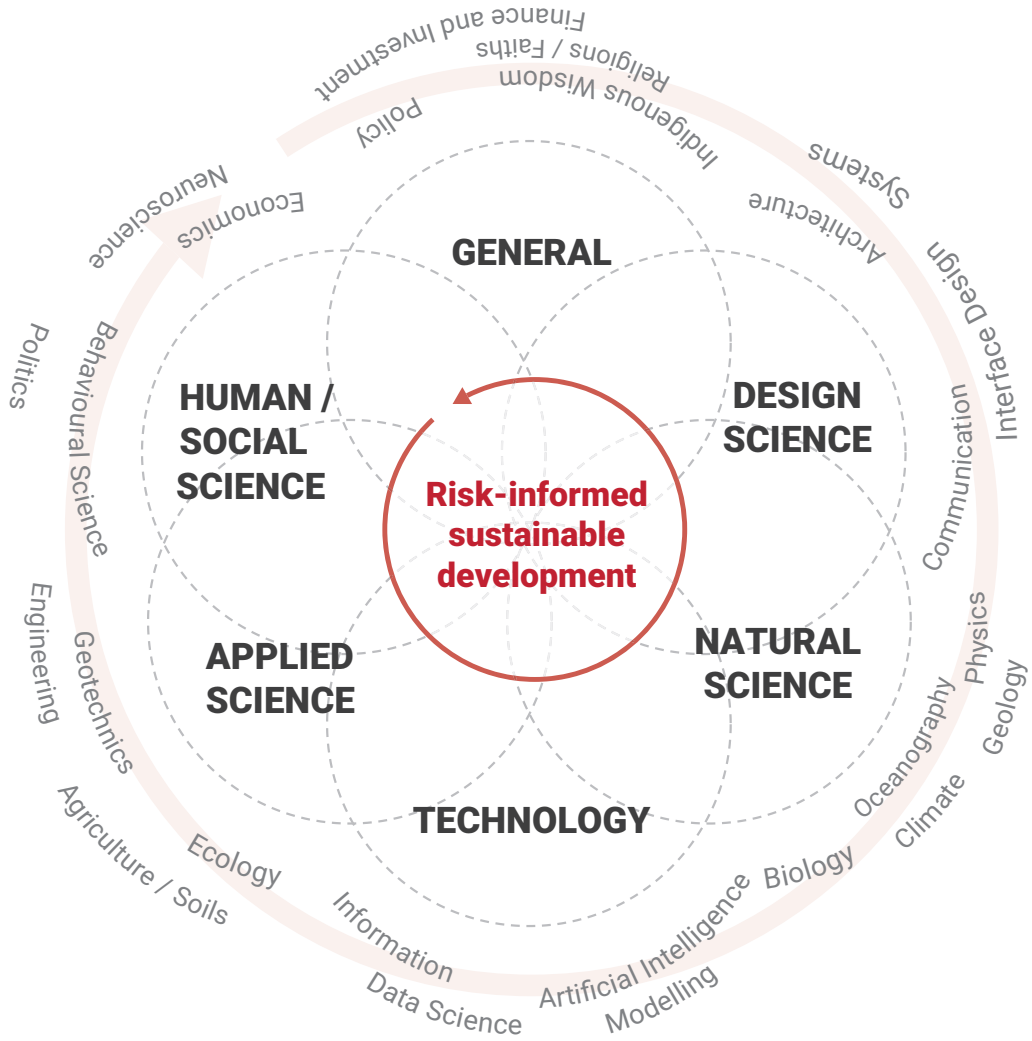
The Sendai Framework takes an interconnected and pluralistic approach to understanding risk. It recognizes that the behaviour of systems is non-linear. It includes a broad spectrum of hazards beyond the natural to include the human-made (e.g. pollution, chemical accidents, avian influenza). It exhorts us to make a fundamental shift in the way in which we develop and use information to make our decisions – away from the deliberate simplification of a problem and its causes by removing it from its context.



COMPLICATED

COMPLEX

Image Source: Gaupp 2019



ACTION

Some degree of reductionism is unavoidable (and in science, this approach has reaped significant benefits, such as advances in molecular biology and our understanding of immunology and human disease). We must break away from the prevailing practice of compartmentalized research, hazard-by-hazard risk assessment and management if we are to improve our understanding of complex systems and risk and collectively identify solutions. This applies as much to our institutional configurations and mechanisms for risk governance as it does to community organization, our research endeavours and macroeconomic policy.

We need to adopt pragmatic, pluralist approaches that can study risk phenomena at a variety of levels. For example, we should redesign our research methodologies to operate in a transdisciplinary manner, to engage non-traditional counterparts (e.g. indigenous wisdom, the faiths, citizen science), and allow for innovative and collective action (e.g. among seismologists, social researchers and city engineers, or through transdisciplinary incident management frameworks).

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The high cost of vulnerability

ISSUE

Risk, impact and capacity to cope evolve throughout a person's life cycle. Vulnerabilities may emerge and change, compound and persist over long periods – leading to disparities in income, inequality based on gender, ethnicity, household and social status. This can contribute to the intergenerational transmission of vulnerability and widening inequalities. Although vulnerability is not a function of poverty alone, disasters magnify existing social inequalities and further disadvantage those who are already vulnerable.

We must also acknowledge that not all of us have the same opportunity to make positive choices. Location, age, gender, income group, disability, and access to/benefit from social protection schemes and safety nets greatly affect the choices people have to anticipate, prevent and mitigate risks.

This is particularly evident in conflict-affected countries, where early findings from national reporting point to a two-way relationship in the occurrence, exposure and exacerbated vulnerabilities induced by the interplay between disasters and conflict. Disasters may exacerbate conflict by placing additional stressors on fatigued governance systems and fuelling existing divides. Similarly, grievances determining the shape and duration of a conflict may be deepened by disasters, intensifying existing imbalances.

Measuring disaster as experienced by individuals requires consideration of how resources are shared among communities, but also among members of the same households. However, traditional measures have not been able to capture such variations because they stop at the national or subnational level. National averages, even city averages, often mask wide disparities among population groups and households.

Location, age, gender, income group, disability, and access to/benefit from social protection schemes and safety nets ***greatly affect the choices people have to anticipate, prevent and mitigate risks.***

ACTION

Advocating, based on our common humanity, for those unable to make choices is critical. Faced with the cumulative and cascading nature of vulnerability, we need timely interventions to effectively protect those groups whose vulnerability profiles (many of these structural and many tied to the life cycle) make them more susceptible to disaster risk. Changes in technology and forms of collaboration offer solutions to some of the problems related to understanding and managing risk.

However, to better understand vulnerabilities, we need systematic effort and sustained funding for integrated risk assessment and disaggregated data collection. This involves harnessing data across different global frameworks and indicators that can be used to compare outcomes and changes over time – among and within countries and households – and to ensure that the needs of the most vulnerable populations do not continue to go uncounted.

We need to understand how life circumstances affect individuals' likelihood of being healthy and educated, accessing basic services, leading a dignified life and eventually "building back better" after a shock. We need sound socioeconomic management that is more fair, inclusive and equitable, and that is underpinned by a systemic, multidimensional understanding of vulnerability (including inequalities and disparities in shared prosperity as the world grows wealthier). We must invest in human capital to enable risk-informed choices, empowering the vulnerable as the drivers of change.

Disaggregated data (e.g. by sex, age, disability, ethnicity, income or geographic location) can be an enabler, revealing the differential impacts and experiences of people in disasters. Such data will identify gaps and more comprehensively reflect the conditions in which risk accumulates and is realized, so as to inform policy interventions that prioritize prospective and corrective risk management above compensatory risk management.

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Nothing undermines development like disasters

ISSUE

The world has been unable to move away from a vicious cycle of disaster–respond–rebuild–repeat. Financing has historically focused on picking up the pieces post-disaster. However, this "band-aid" approach is not appropriate. It continues to undermine progress towards sustainable development. Risk generated by the interaction of complex human and natural systems, amplified by changes in climate, is reversing efforts to achieve the goals of the 2030 Agenda for Sustainable Development (2030 Agenda). The very survival of humans on the planet is at stake.

Development assistance for risk reduction has been highly volatile and marginal, and dwarfed by financing for disaster response. A total of $5.2 billion for disaster risk reduction between 2005 and 2017 represents a marginal fraction (3.8%) of the total amount of overseas development assistance. In general, post-shock assistance (i.e. for disaster response, reconstruction, rehabilitation and recovery) dominates at the expense of funding dedicated to understanding the underlying vulnerabilities contributing to risk and to reducing them. Global resource requirements to deal with growing risk are increasing faster than national and international capacities to meet them, leaving millions of affected people behind.

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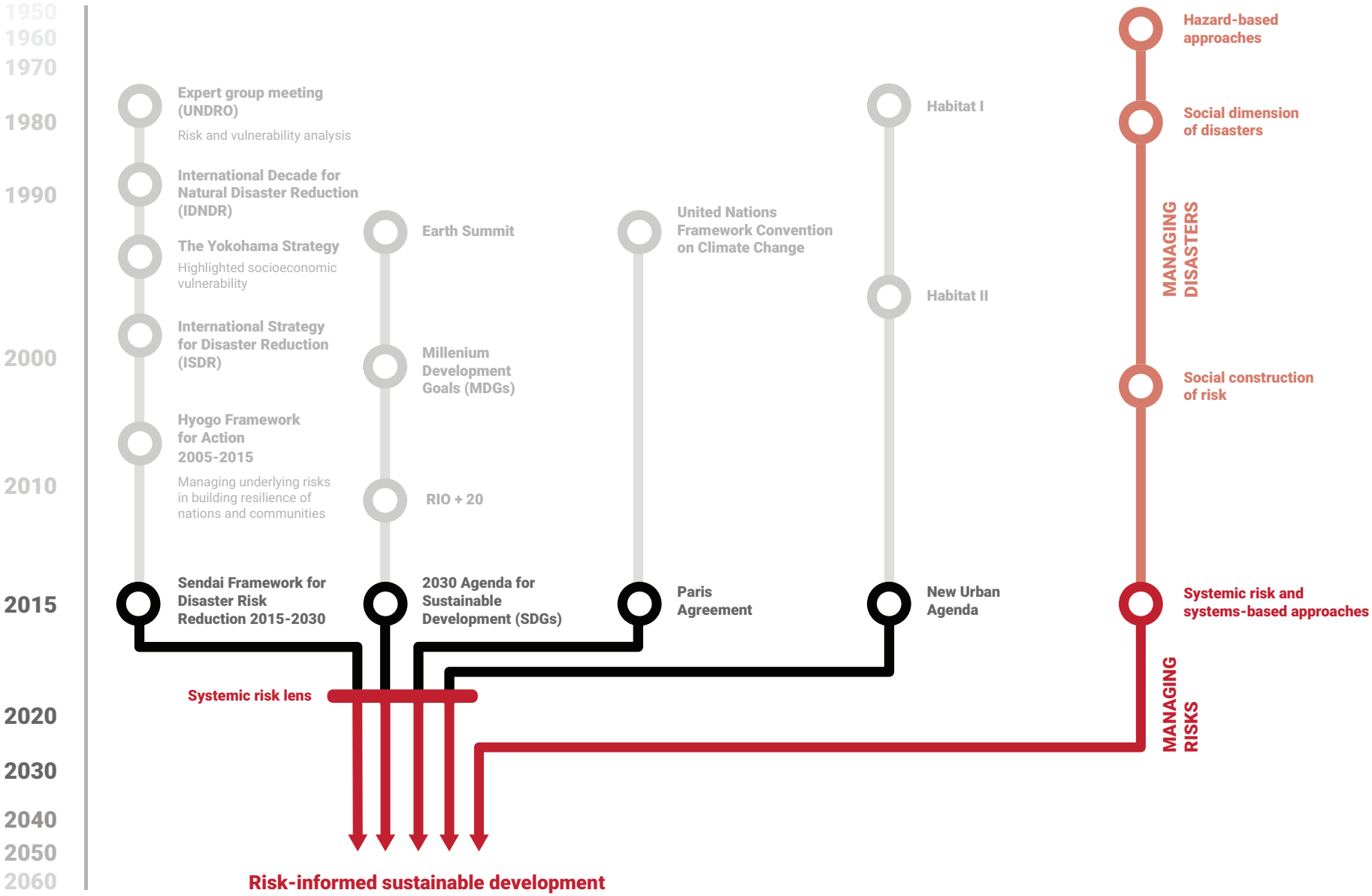
ACTION

The global policy agenda incorporates a common message - Understanding hazard characteristics and how they interact, as well as managing exposure and vulnerability (the core aspects of risk), are imperative for development to be achievable, let alone sustainable.

Unacknowledged, unaddressed and unknown risk sits at the heart of the global threat to sustainable development. As a practical framework for dealing with risk, the Sendai Framework is the connecting tissue for the post-2015 international agreements: the 2030 Agenda, Paris Agreement, New Urban Agenda, Addis Ababa Action Agenda and Agenda for Humanity. It also makes the logical connection between reducing risk and building resilience, because an enhanced understanding of risk, strengthened risk governance, increased investment and better preparedness creates a foundation for the resilience of people, communities, governments and businesses.

Development planning must be risk informed to create sustained change. Risk-informed development means that initiatives must incorporate contextual and integrated assessments that acknowledge the range and complexity of current and potential interacting hazards and risks. It means acknowledging the interaction of risk, human choices and natural systems, and emphasizing the rational use of limited available resources. To do this, we must move away from short-sighted, segmented planning and implementation to transdisciplinary, collaborative approaches that build resilience (e.g. approaches that promote local and diverse food systems that fully meet the requirements for human dietary health for all in a stable manner) and that regenerate relevant resources, avoiding both expected and unexpected negative consequences.


1950
1960
1970
1980
1990
2000
2010
2015
2020
2030
2040
2050
2060
Expert group meeting (UNDRO)
Risk and vulnerability analysis
International Decade for Natural Disaster Reduction (IDNDR)
The Yokohama Strategy
Highlighted socioeconomic vulnerability
International Strategy for Disaster Reduction (ISDR)
Hyogo Framework for Action 2005-2015
Managing underlying risks in building resilience of nations and communities
Sendai Framework for Disaster Risk Reduction 2015-2030
Earth Summit
Millenium Development Goals (MDGs)
RIO + 20
2030 Agenda for Sustainable Development (SDGs)
United Nations Framework Convention on Climate Change
Paris Agreement
Habitat I
Habitat II
New Urban Agenda
Hazard-based approaches
Social dimension of disasters
MANAGING DISASTERS
Social construction of risk
Systemic risk and systems-based approaches
MANAGING RISKS
Systemic risk lens
Risk-informed sustainable development

Levelling the playing field

ISSUE

The multilateral approach to global development and global policy is facing significant challenges. The benefits of socioeconomic development, economic integration and trade are shared by a limited number of countries, leaving others with constrained policy space to negotiate terms commensurate with their needs. There is growing evidence that the benefits of increasing economic integration have not been equitably shared among and within countries. Unsustainable patterns of growth hide the build-up of systemic risks across different sectors (e.g. macroeconomic overdependence on single crop/sector coupled with the overshoot of 1.5°C global warming above pre-industrial levels), which will severely disrupt economic activity and inflict long-term damage to sustainable development.

We witness severe inequalities of burden sharing between low- and high-income countries, with the poorest bearing the highest toll and greatest costs of disasters. Human losses and asset losses relative to gross domestic product (GDP) tend to be higher in the countries with the least capacity to prepare, finance and respond to disasters and climate change, such as in small island developing States (SIDS). For many SIDS, future disasters represent an existential threat.

In recognizing this challenge, Sendai Framework Target (f) calls for substantially enhanced international cooperation to developing countries, so allowing space for countries to adopt effective policies that enhance domestic public finance for risk-informed sustainable development.

ACTION

International cooperation must be predicated on an equitable and accessible system that recognizes the vulnerability inherent in differing stages of socioeconomic development. Reform of financial systems is essential – notably those that tie countries into debt mechanisms from which it is difficult to escape.

We must recognize that an international development financing system that allocates approximately 20 times the funding to emergency response, reconstruction, relief and rehabilitation activities rather than prevention and preparedness, acts counter to sustainability principles. And so we must redesign global financing and international development cooperation systems to include proportionate and context-driven solutions commensurate with the disproportionate exposure to environmental and economic risk faced by certain countries.

International pressure for a fairer, sustainable, equitable planet must materialize mixed and innovative financing approaches, pro-growth tax policies and well-managed domestic resource mobilization that respond to the cascading and interlinked nature of these risks.

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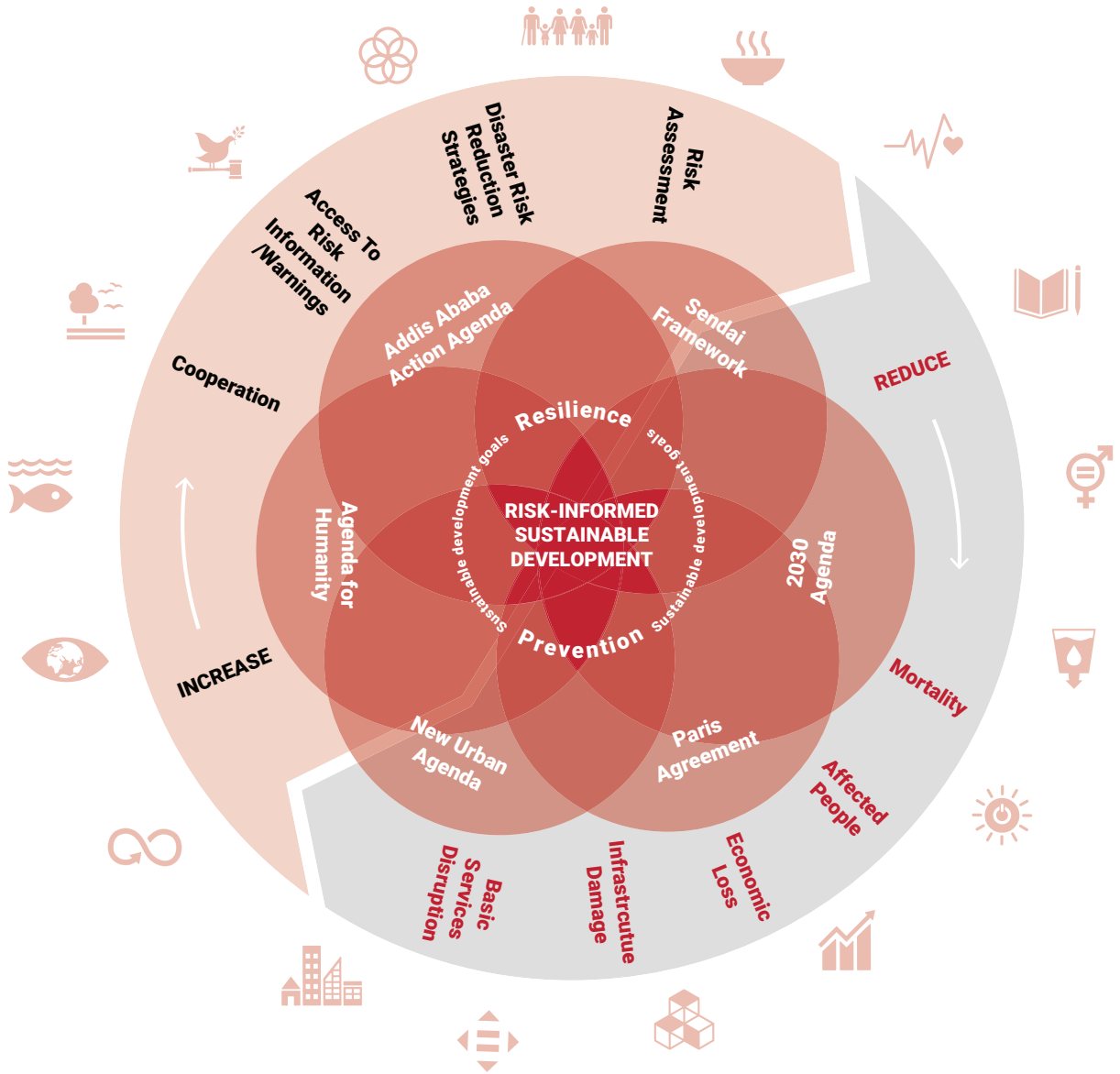
Risk Assessment
Disaster Risk Reduction Strategies
Access To Risk Information /Warnings
Cooperation
INCREASE
REDUCE
Mortality
Affected People
Economic Loss
Infrastrcutue Damage
Basic Services Disruption
Addis Ababa Action Agenda
Sendai Framework
Agenda for Humanity
2030 Agenda
New Urban Agenda
Paris Agreement
Resilience
Prevention
Sustainable development goals
Sustainable development goals
RISK-INFORMED SUSTAINABLE DEVELOPMENT

Climate change - the great risk amplifier

ISSUE

Climate change is a major driver and amplifier of disaster losses and failed development. It amplifies risk. Decades-old projections about climate change have come true much sooner than we expected and at a calamitous scale. The threshold of limiting global warming increase to 1.5°C above pre-industrial levels that the Paris Agreement sought to cap, will be surpassed in the late 2030s / early 2040s. Worse, the Intergovernmental Panel on Climate Change (IPCC) estimates that if countries restrict effort to the commitments made in the Paris Agreement, we are looking at warming in the realm of 2.9°C–3.4°C by the end of the century.

Non-linear change in hazard intensity and frequency is already a reality. Affecting the intensive and extensive nature of risk, climate change can generate more powerful storms, exacerbate coastal flooding, and bring higher temperatures and longer droughts. Emergent climate-related risks will alter most of our current risk metrics. Growth in death, loss and damage will surpass already inadequate risk mitigation, response and transfer mechanisms in much of the developing world. If global warming is not contained within 1.5°C in a generation, the IPCC Special Report on 1.5°C estimates that the number of people exposed to declining crop yields could rise from approximately 35 million at 1.5°C to 370 million at 2°C.

If the 1.5°C threshold is breached, the possibilities to adapt will diminish as ecosystem services collapse – unable to support current economic activity and human populations, migration on a scale never before seen may be triggered from arid and semi-arid regions to low elevation coastal zones, building risk. Negative emission technologies (NET) – such as reforestation, afforestation or soil carbon enhancement – will be the only recourse, but these will have massive first- and second-order risk implications at a regional scale.

Risk reduction processes have multiple connections with climate change mitigation, adaptation and vulnerability reduction (e.g. more secure land tenure and better access to electricity and agricultural extension services can facilitate drought mitigation). And yet few disaster risk reduction plans take these connections into account. Failure to include climate change scenarios in assessment and risk reduction planning will build inherent redundancy in all we do.

"If solutions within the system are so impossible to find, maybe we should change the system itself."

Greta Thunberg, Sweden, youth advocate for global action on climate change, 2019

ACTION

The 2018 IPCC Special Report on Global Warming of 1.5°C presents new evidence on climate change that was not available when the Sendai Framework was adopted. It identifies that we must be more ambitious about the speed and magnitude of the changes we need to make. Any vulnerability reduction measures – captured in national and local adaptation plans and disaster risk reduction plans – must be developed in conjunction with the simultaneous systemic changes that must be engineered in energy, industrial, land, ecological and urban systems.

The development of disaster risk reduction strategies and plans at the local, national and regional levels, and the assessments that underpin them, must integrate near-term climate change scenarios, and elaborate the enabling conditions for transformative adaptation presented by IPCC.

For more, see GAR19
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Data, direction, decisions

ISSUE

Without accurate evidence of where we currently stand, we cannot confidently chart our path forward. Turning the aspirations of risk-informed sustainable development into reality will require robust data and statistics that are timely, accurate, disaggregated, people centred and accessible, and which enable us to capture progress and direct investments accordingly.

Some four years after the adoption of the 2030 Agenda and the Sendai Framework, countries have taken concrete steps towards meeting the ambitious aspirations of these transformative plans. Early lessons from the first years of reporting – using the Sendai Framework Monitor (SFM) – reiterate previous trends showing the highest toll of disasters being experienced in the most vulnerable segments of the world's population, underlining the gross inequality of burden sharing among countries. Low- and middle-income countries bear the greatest impact in terms of mortality and yearly average economic loss relative to GDP.

Data is traditionally the province of the equipped and the funded. Many national governments do not have the capacity to analyse and use data, even if they have the means to collect it. Development actors and the private sector have the capacity, but the true dividends of interoperable, convergent data and analytics are missed.

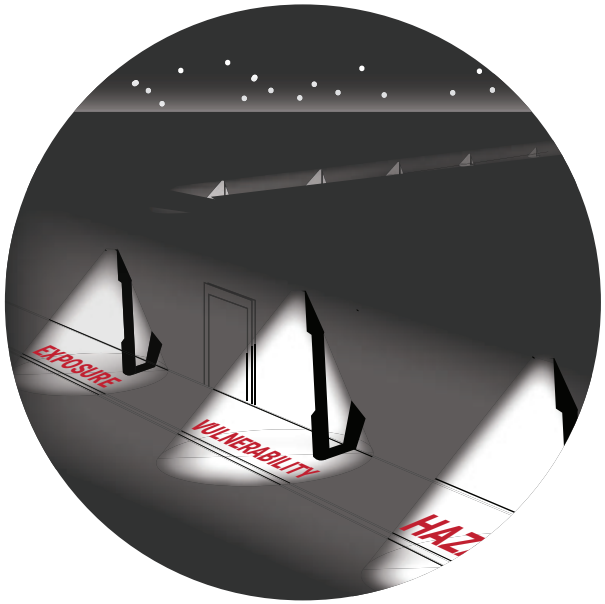
While integrated monitoring and reporting on the Sendai Framework and the Sustainable Development Goals (SDGs) is a reality – thanks to use of common metrics and the online (SFM) – data collection is fragmented, non-universal, not commeasurable and biased. There is often a disconnect among "knowing" something, making it "available and accessible" and "applying" what is known.

Data availability and quality are improving steadily. The landscape of statistical capacity-building is opening up to accommodate collaboration and synergies across increasingly complex data systems. International attention and focused funding across different targets and indicators are increasing and slowly starting to yield results (e.g. data availability and study of agricultural losses by crop type).

It is critical that momentum is not lost, and that coordinated, integrated global and national efforts strengthening data generation, statistical capacity and reporting continue.

There are many countries unable to report adequately on progress in implementing the Sendai Framework and risk-related SDGs. This will not change without a sense of urgency translated into political leadership, sustained funding and commitment for risk-informed policies supported by accurate, timely, relevant, interoperable, accessible and context-specific data.

Understanding risk is more than just understanding hazards



Linking an understanding of multiple hazards, plus exposure and vulnerability gives a clearer picture of risk

Interconnecting all our knowledge is complex, but the better linked the data, the better the interconnected nature of risk is explained

Data, direction, decisions

ACTION

We cannot expect good plans in the absence of good data. We must resist the temptation to own data. We must commit to open data platforms, and data sets that seek accuracy and honesty, to show the real picture. People must be put at the centre of data generation and collection, so that information collected is contextual and improves our understanding of how people experience risk and loss, allowing the development of solutions that are relevant and effective. Risk information must be integrated into development indicators, and inform the sequencing of planning, budgeting and action.

We need to look at indicators afresh, across goals and targets, and establish metrics for those dimensions of disaster impacts that accrue to the most vulnerable. Notably, this should be done by going deeper into distributional analysis, moving away from regional, national and subnational data to the household level. We must understand in finer detail how shocks affect people's lives in a systemic way. We must then support governments to find solutions and influence human behaviour, to successfully prevent the creation and propagation of risk, as well as to rebound from disasters.

We must bring data collection efforts for the Sendai Framework into the domain of official statistics – in coordination with national statistics offices – standardizing event-disaggregated disaster loss accounting practice in support of more credible analysis and Sendai Framework monitoring.

We must invest in physical infrastructure, especially in the information technology sector, to ensure better online reporting and loss accounting at all administrative levels while building capacities in cartography and geospatial data. Data innovations, including integration of geospatial information, as well as citizen-generated data, must be mainstreamed. Aligned regional targets and indicators (or at least with other countries with similar geopolitical and hazard profiles) should be established so that spatial comparisons can be made.

We need to build partnerships with other stakeholders and expert organizations to enable strong data-sharing networks and comprehensive reporting, including those addressing the data challenges of the 2030 Agenda. Such partnerships should explore multiple uses of data, so that there is higher demand and intrinsic incentivization for data collection and sharing. And we must engage with the private sector (e.g. the insurance industry, the housing sector and chambers of commerce and industry) for a more comprehensive capture of economic losses.

These are time-critical actions if the goals of the Sendai Framework and the 2030 Agenda are to be achieved by the end of the next decade. Urgency is required in improving access to good data, if Member States are to be able to adequately monitor and report on progress, and determine requirements for course correction.

*...a sense of urgency translated into **political leadership**, **sustained funding** and **commitment** for risk-informed policies supported by accurate, timely, relevant, interoperable, accessible and context-specific data.*

For more, see GAR19
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Governments – why planning for a rainy day makes sense

ISSUE

Governments have a responsibility for creating an environment in which people prosper and the planet thrives. This is non-negotiable. Investing in risk reduction is investing in the public good, but political cycles, competitive agendas and strained budgets make planning and taking responsibility for delivering change difficult.

Despite the evidence that no one – individual or country – is immune to risk, budgeting for the "what-if" scenario does not come naturally to governments. But planning and risk-informed investment is common sense and should be translated into action.

Being able to generate and collect robust data, define risk and implement initiatives that respond accordingly make for smart decisions and investments. The predilection for diverting or mobilizing funds for financing recovery and reconstruction after disasters succeeds only in accumulating risk over time.

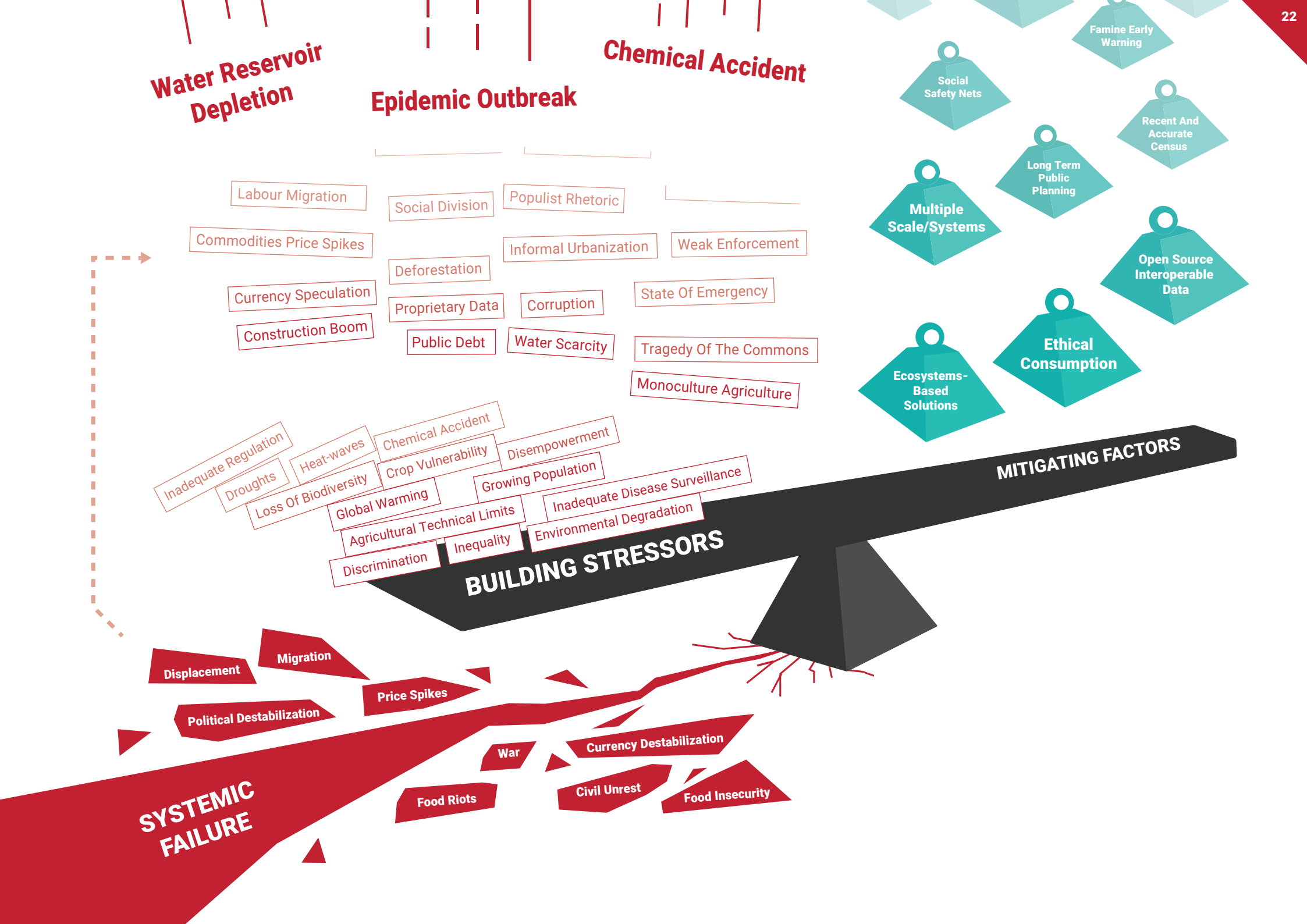
ACTION

Sendai Framework Target (e) requires governments to develop aligned national and local disaster risk reduction strategies. It is the only target to be met by 2020. These national and local disaster risk reduction strategies are the foundation for the achievement of the 2030 targets. Progress has been steady, but we are not on track to meet the 2020 target.

National and local governments must shift the emphasis from disaster response to preventing the creation and propagation of risk. Governments must incentivize and demonstrate risk reduction, leading by example. Electorates, non-governmental organizations and civil society must hold governments accountable for doing so, without neglecting their own share of responsibility. Governments therefore need to invest in building and sharing risk data (within and among State institutions, administrative levels and the general public), and in using it to formulate context-specific national risk reduction strategies.

Governments need to understand the social, ecological and economic dimensions of exposure and vulnerability. Plans and strategies need to focus on inclusion and equality to effectively promote whole-of-society resilience. Vulnerability reduction measures written into national and local sustainable development plans, climate change adaptation plans, and disaster risk reduction strategies and plans must be linked across sectors, scales and territories. These strategies and plans need to be underpinned by, and drive resources, both financial and human, towards risk-informed action.

For more, see GAR19
PART II
PART III


Water Reservoir Depletion
Epidemic Outbreak
Chemical Accident
Famine Early Warning
Social Safety Nets
Recent And Accurate Census
Long Term Public Planning
Multiple Scale/Systems
Open Source Interoperable Data
Ethical Consumption
Ecosystems-Based Solutions
Labour Migration
Social Division
Populist Rhetoric
Commodities Price Spikes
Informal Urbanization
Weak Enforcement
Deforestation
Currency Speculation
Proprietary Data
Corruption
State Of Emergency
Construction Boom
Public Debt
Water Scarcity
Tragedy Of The Commons
Monoculture Agriculture
Inadequate Regulation
Heat-waves
Chemical Accident
Droughts
Crop Vulnerability
Disempowerment
Loss Of Biodiversity
Growing Population
Global Warming
Inadequate Disease Surveillance
Agricultural Technical Limits
Environmental Degradation
Discrimination
Inequality
BUILDING STRESSORS
MITIGATING FACTORS
Displacement
Migration
Price Spikes
Political Destabilization
War
Currency Destabilization
Food Riots
Civil Unrest
Food Insecurity
SYSTEMIC FAILURE

Risk is everyone's business

ISSUE

We encounter, contribute to and deflect risk daily. It is human nature to look for the positive angle, and to procrastinate over things that are complex, or for which informed decisions are difficult. We are especially good at shifting responsibility: thinking that reducing risk is something that can be passed on to a third party – the government, our neighbours, …, our children.

The truth is that this responsibility is a shared one, and that risk reduction is everyone's business. Risk is ultimately the result of decisions that we all make, either individually or collectively, as to what we do and don't do.

The consequences of inaction in addressing the systemic nature of risk to individuals, organizations and society are becoming increasingly apparent. Even half a planet away, risk that is allowed to grow unchecked – and in plain sight – can affect us. Just recall the global financial crisis in 2008. While governments are responsible for incentivizing (e.g. by putting in place rules and regulations) and leading risk reduction, as individuals, we must own the consequences of our decisions, our action or inaction, and the risks that we create and propagate. This means fundamental changes in our own behaviour. Each of us.

ACTION

We must mobilize to collectively determine solutions. As individuals, we must commit to engaging daily with the question: "Am I living today in a way that I can assure my, and my children's tomorrow?" We must recognize that the risk we are accumulating – whether at the planetary or individual level – is often the function of our own decisions and choices; our inaction as much as our action.

We must honestly review how our relationship with behaviour and choice transfers to individual and collective accountability for risk creation, or its reduction. This understanding should translate into action, for example, by revisiting how and what we produce and consume, and by reshaping food, energy and transportation systems.

We must provide decision-friendly scenarios and options at individually relevant geospatial and temporal scales, providing relevant data and information to support people to better understand the nature of their own risk and how to deal with it.

For more, see GAR19
CHAPTER 2
PART II
PART III

The individual at the centre of this diagram is you – the reader. No one is an island. Our actions – how we live in community, how we interact, how we advocate with our governments and what products we buy – and the actions that we don't take will either contribute to the problem, or to the solution. Change is not negotiable.

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