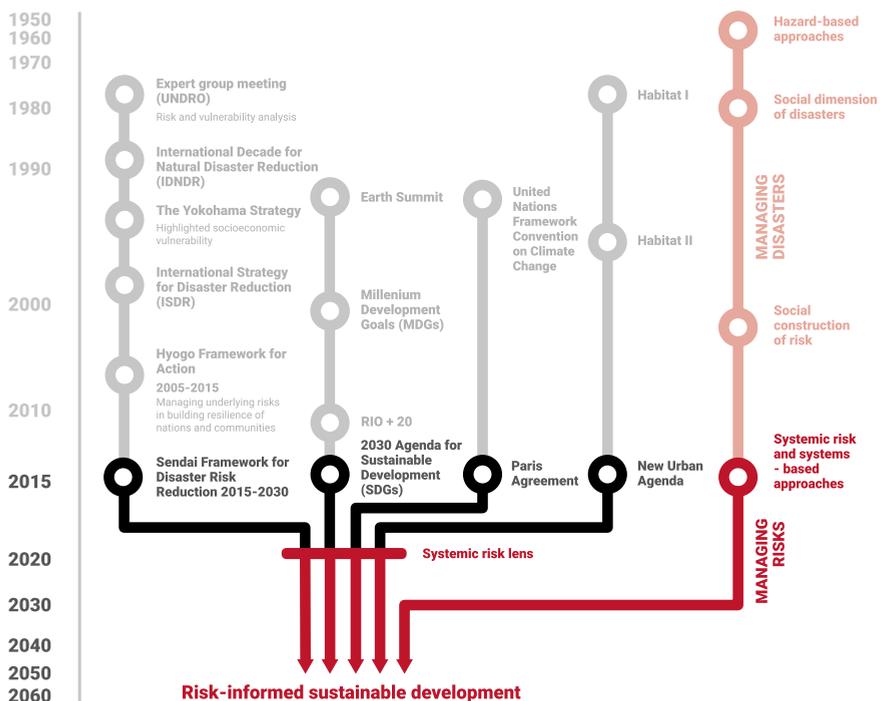


# Chapter 1: How we got to now

## 1.1 Evolution of the global policy agenda for disaster risk reduction

The adoption of the Sendai Framework for Disaster Risk Reduction 2015–2030 (Sendai Framework)<sup>1</sup> at the third United Nations World Conference on Disaster Reduction (WCDR) – and its subsequent endorsement by the General Assembly of the United Nations (Resolution A/RES/69/283) in June 2015 – marked the culmination of a process formally begun in the 1970s.

**Figure 1.1. Risk reduction – a journey through time and space**



(Source: UNDRR 2019)

<sup>1</sup> (United Nations General Assembly 2015a)

## 1970s

Having observed that actual and potential consequences of natural hazards were becoming so severe, and were of such a scale, that much greater emphasis on pre-disaster planning and prevention was imperative, the United Nations Disaster Relief Coordinator convened an International Expert Group Meeting in July 1979 to review six years' worth of work developing a methodology for risk and vulnerability analysis.

## 1980s

This work laid the foundations for the development, 10 years later, of the International Framework of Action for the International Decade for Natural Disaster Reduction (IDNDR)<sup>2</sup>, beginning on 1 January 1990.<sup>3</sup>

## 1990s

Supported by a Secretariat established at the United Nations Office in Geneva, IDNDR was intended to reduce – through concerted international action – loss of life, damage to property, and social and economic disruption caused by “natural disasters”, especially in developing countries. With a strong emphasis on engaging and deploying existing scientific and technical knowledge, IDNDR succeeded in raising public awareness – notably of governments – to move away from fatalism and to reduce disaster losses and impacts. A pivotal moment in IDNDR was the adoption (in 1994) of the Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation, containing the Principles, the Strategy and the Plan of Action (Yokohama Strategy)<sup>4</sup> at the World Conference on Natural Disaster Reduction.

## 1994

The Yokohama Strategy marked the beginning of a significant shift in the political and analytical context within which disaster reduction was being considered. While IDNDR was largely influenced by scientific and technical approaches, the Yokohama Strategy attributed great importance to socio-economic vulnerability in disaster risk analysis, emphasizing the crucial role of human actions in reducing the vulnerability of societies to natural hazards and disasters.

## 2000s

Having been so mobilized, at the conclusion of IDNDR, Member States determined in 1999 that IDNDR would be succeeded by the International Strategy for Disaster Reduction (ISDR).<sup>5</sup> This would seek to: (a) enable communities to become resilient to the effects of natural hazards, and related technological and environmental disasters, thus reducing the compound risk posed to social and economic vulnerabilities within modern societies, and (b) proceed from protection against hazards to the management of risk, by integrating risk prevention strategies into sustainable development activities.

At the end of the period covered by the Yokohama Strategy, in 2004 and 2005, the United Nations Secretariat of the International Strategy for Disaster Reduction carried out a review of the Yokohama Strategy and Plan of Action for a Safer World. The Yokohama Review found evidence of greater official and public understanding of the effects of disasters on the economic, social and political fabric of societies, and stated that “significantly greater commitment in practice is required”. It also identified challenges and gaps in five main areas: governance; risk identification, assessment, monitoring and early warning; knowledge management and education; reducing underlying risk factors; and preparedness for effective response and recovery.

## 2005–2015

The Yokohama Review was submitted to the second WCDR in Kobe, Japan, in January 2005. It formed the basis for formulation of the Hyogo Framework for Action 2005–2015: Building the Resilience of Nations and Communities to Disasters (HFA). The adoption and implementation of HFA following WCDR marked a milestone in catalysing national and local efforts to reduce disaster risk and in strengthening international cooperation through the development of regional strategies, plans and policies, and the creation of global and regional platforms for disaster risk reduction (DRR), as well as the adoption by the United Nations of the United Nations Plan of Action on Disaster Risk Reduction for Resilience.

Member States adopted a series of principles to support implementation of HFA including: the primary responsibility of States to prevent and reduce disaster risk together with empowered relevant national and local authorities, sectors and stakeholders; all-of-society, inclusive, engagement; coordination within and across sectors and with relevant stakeholders at all scales; a multi-hazard approach and inclusive, evidence-based risk-informed decision-making; addressing underlying risk factors through public and private investments informed by disaster risk; strengthening international cooperation; and emphasis on developing countries.

HFA provided detailed guidance and policy space to advance the management of underlying risks in countries' growth and development – a space that the disaster risk management (DRM) community mostly failed to fill. Nevertheless, in establishing policy, legislative and planning frameworks, many countries laid the foundation for the shift from managing disasters to managing risk, which would eventually be enshrined in the Sendai Framework. HFA oversaw inter alia an increasing emphasis on multi-hazard, as opposed to single-hazard, approaches to risk reduction, albeit in a context characterized by competition for political or economic priority, limitations in terms of capacity, technical and financial resources across sectors and scales, and the subsequent application of risk information in decision-making.

Least progress was made in HFA Priority for Action 4 (Reduce the underlying risk factors). In general, institutional, legislative and policy frameworks did not sufficiently facilitate the integration of disaster risk considerations into public and private investment, environmental and natural resource management, social and economic development practices in all sectors, land-use planning and territorial development.

Weak alignment and coherence in policies, financial instruments and institutions across sectors became a driver of risk. Few countries adopted frameworks of accountability, responsibility and enforcement and also appropriate political, legal and financial incentives to actively pursue risk reduction and prevention.

In addition, few countries addressed the often-interdependent risks they faced in a holistic manner, with investments in key sectors such as health, agriculture and food security, education, infrastructure, tourism and water omitting disaster risk. Incentive structures were found to be in need of reinforcing, including the encoding of costs and benefits of DRR in economic valuations, competitiveness strategies and investment decisions, including in debt ratings, risk analysis and growth forecasts or the inaccurate pricing of risk in the global financial architecture.

Therefore, hazard exposure in both higher and lower income countries increased faster than vulnerability decreased, new risks were being generated faster than existing risks were being reduced. The value of lost and damaged housing, businesses, infrastructure, schools, health facilities and other assets increased relentlessly, leading to increases in contingent liability and sovereign risk for governments in many instances.

Underpinned by poorly planned and managed urban development, environmental degradation, poverty and inequality, and also weak risk governance, frequent and extensive low-severity disasters were found to increasingly affect the more vulnerable elements of society, thus challenging the achievement of social development goals. With the causes and consequences of risk being transmitted across geographic regions and income classes, between present and future generations and between social and economic sectors, HFA helped to identify disaster risk as a critical issue of global and regional governance, national safety and security, and a threat to the achievement of sustainable development.

---

2 (United Nations General Assembly 1987)

3 (United Nations General Assembly 1989)

4 (United Nations General Assembly 1989)

5 (United Nations General Assembly 2000)

At the end of implementation of HFA, Member States recognized that efforts had not led to reduced physical losses and economic impacts. They concluded that the focus of national and international attention must shift from protecting social and economic development against perceived external shocks, to transforming growth and development to manage risks, in a holistic manner, in a way that promotes sustainable economic growth, social well-being and a healthy environment that strengthens resilience and stability.

This conclusion formed the basis for the development of the Sendai Framework, and the subsequent increased emphasis on addressing the underlying drivers of risk, preventing the creation of new risk, reducing the existing stock of risk and strengthening the resilience of nations and communities.

## 1.2

### Sendai Framework and the pursuit of risk-informed sustainable development

Soon after the Sendai Framework had been negotiated at the third WCDR, Nepal was struck by the powerful Gorkha earthquake on 25 April 2015. Ravaged by the initial event, numerous aftershocks and another quake 17 days later, 8,891 people lost their lives, 22,303 were seriously injured and millions were made homeless. Nepal had to absorb damage and losses of an estimated \$7 billion,<sup>5</sup> a bill it could ill afford. It was a jarring reminder of the devastation wrought when the context of hazard, exposure and vulnerability is allowed to evolve without adequate attention to the corollary risk it is building. It demonstrated anew how apparently disparate decisions across sectors, geographies and scales – endogenous to

development processes – are intrinsically braided together.

Enhancing understanding and management of the threads of this collective, social construction of risk, as well as the impacts that impinge upon individuals, households, communities, cities, countries, economies or ecologies through time, is at the heart of the aspirations and goals of the Sendai Framework, adopted by Member States at the United Nations General Assembly in June 2015. The principles reflect the collective responsibility of people, governments, communities, the private sector, investors, media and civil society to effectively prevent and reduce disaster risks. They embody increased demands for accountability mechanisms to protect populations and ecosystems, while instituting risk-informed approaches to better manage current and emerging risks.

As with the Transforming our World: the 2030 Agenda for Sustainable Development (2030 Agenda),<sup>7</sup> the outcome and goal of the Sendai Framework is underpinned by the principle of universality, recognizing that no society – regardless of income classification – is immune to the negative consequences of realized risk. Traditional event-based estimates of (predominantly direct) impact attribute most economic losses to high-income nations – a function of the higher monetary value of insured damaged assets – while the human cost of disasters is substantially higher in low- and lower middle-income countries. Such analyses correctly identify the most vulnerable segments of the world's population as consistently suffering the most harmful effects – in many instances, reversing development gains, corroding resilience, undermining sustainability, eroding well-being and diminishing socioeconomic growth.

Recognizing the threat that risk poses to sustainable development – be it as a result of economic loss or the disruption to social and ecological systems<sup>8</sup> – the Secretary-General of the United Nations noted (on the International Day for Disaster Reduction, 13 October 2017):

*The challenge is to move from managing disasters themselves to managing risk. Poverty, rapid urbanization, weak governance, the decline of ecosystems and climate change are driving disaster risk around the world. The Sendai Framework for Disaster Risk Reduction with its seven targets for the prevention of disasters and reducing disaster losses is essential to achieving the Sustainable Development Goals.*

Unresolved vulnerabilities, rising exposure and proliferating, mutable hazard events continue to drive catastrophic loss of life, disrupt livelihoods and fuel new displacement – an additional 17.2 million people were internally displaced in 2018 alone as a result of climate-related disasters and natural hazards.<sup>9</sup> It is estimated that people in least developed countries are, on average, six times more likely to be injured, lose their home, be displaced or evacuated, or require emergency assistance, than those in high-income countries.<sup>10</sup>

The impact is greatest on the most marginalized populations, exacerbating inequality and further entrenching poverty, where vulnerabilities translate into reduced access to entitlements, impaired capabilities and opportunities.<sup>11</sup> For instance, it is estimated that 35.6% of the population affected by floods in Pakistan in 2010 consequently slipped under the poverty line as a result.<sup>12</sup> Beyond focused attribution to single events, when extending the spatio-temporal nature of consequence analysis, impacts are often found to be a function of a series of associated shocks – famine, disease and displacement for instance – that collectively prompt disruptions in multiple dimensions (e.g. livelihoods, educational trajectories or labour-market opportunities).

Such analyses remain a grossly under investigated domain. The longitudinal, indirect consequences of the realization of accumulated risks are likely to affect and potentially reverse development gains in affected areas for generations to come. These consequences may be in the form of deprivations in early childhood nutrition, disease, school interruption, ill-developed cognitive and social skills, or limited labour-market opportunities. Children are particularly affected by the disruption of education and health-care systems;<sup>13</sup> women and girls suffer higher levels of violence and generally worse economic outcomes following disasters;<sup>14,15</sup> and the extent to which mental health, well-being and the ability to lead a dignified life are negatively affected is little understood.

Such are the current limitations in understanding of risk and the interdependencies and correlations that exist within and among social, ecological, economic and political systems, which, in turn, diminish the ability to predict or influence outcomes. However, the principles of integration and indivisibility that underpin the Sustainable Development Goals (SDGs), and the related call in the Sendai Framework for the adoption of systems-based approaches and an improved understanding of the dynamic nature of systemic risk, are driving new lines of enquiry, model methodologies, and opportunities for data cultivation and exchange among communities.

## 1.2.1

### Risk reduction post-2015

All post-2015 agreements – namely the 2030 Agenda, the Paris Agreement on climate change,<sup>16</sup> the New Urban Agenda (NUA),<sup>17</sup> the Addis Ababa

6 (Nepal 2015)

7 (United Nations General Assembly 2015c)

8 (Benson 2016); (Hallegatte et al. 2017)

9 (Internal Displacement Monitoring Centre 2019)

10 (Wallemaq, Below and McLean 2018)

11 (Benson 2016); (Hallegatte et al. 2017); (ESCAP 2017a)

12 (ESCAP 2017b)

13 (Benson 2016); (Kousky 2016)

14 (IFRC 2015); (IFRC 2017)

15 (ESCAP 2017a); (Hallegatte et al. 2017)

16 (UNFCCC 2016)

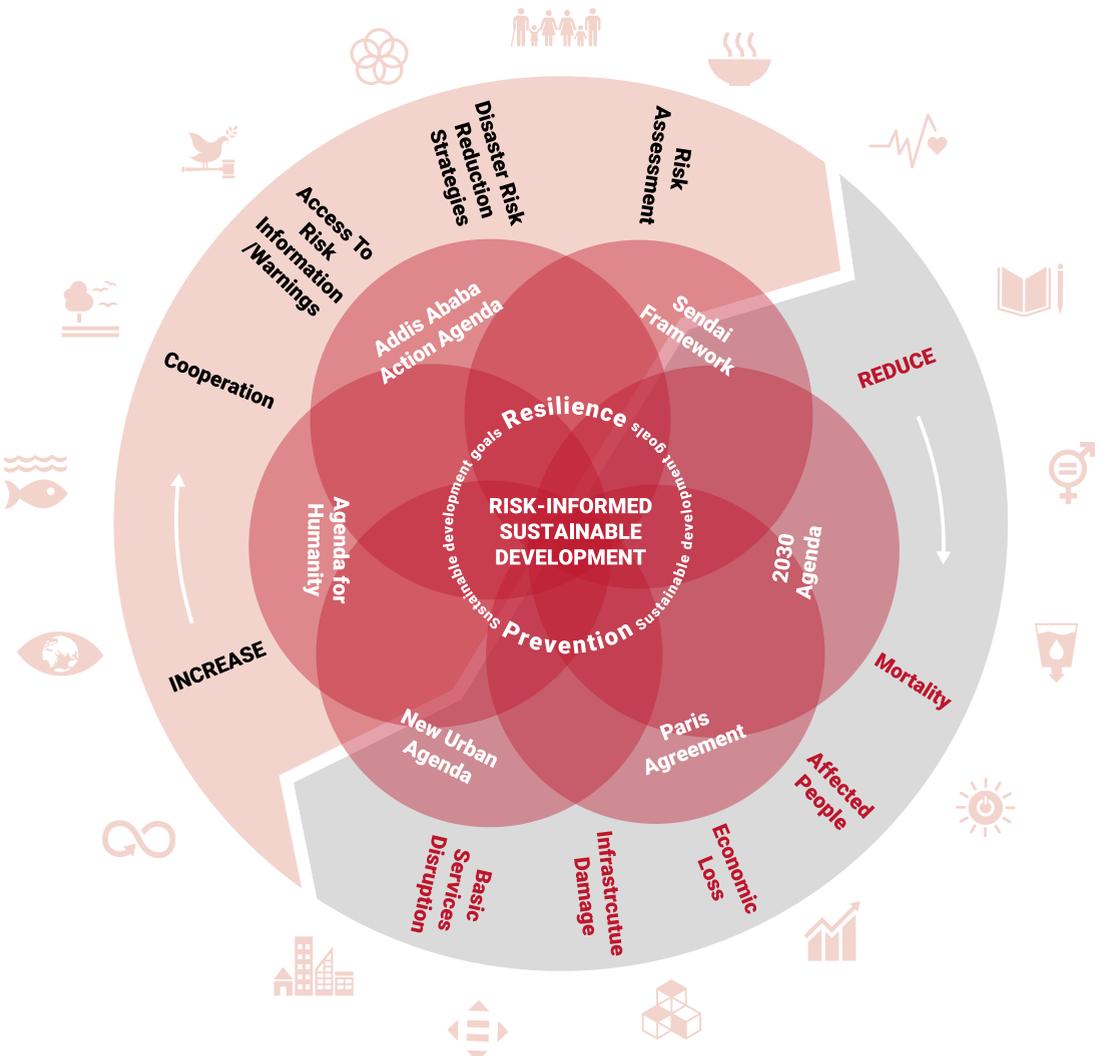
17 (United Nations General Assembly 2017b)

Action Agenda (AAAA)<sup>18</sup> and the Agenda for Humanity<sup>19</sup> – include elements of DRR and resilience in their scope.<sup>20</sup> They all point to the interconnection of global challenges and risks.

The implementation of these agreements requires and provides the opportunity to address underlying risk drivers by fostering risk-informed investment and focusing on issues such as poorly planned urbanization, climate change, environmental degradation and poverty.<sup>21</sup> In so doing, common actions

will simultaneously support the achievement of the goals and targets of all agreements, including the Sendai Framework. The relevance of DRR to the post-2015 development agreements and the links among them create opportunities to: build international coherence and foster risk-informed policy and decision-making; promote multi-hazard and cross-sectoral approaches to assessing risk; and encourage a deeper understanding of socio-economic and environmental vulnerability across different sectors and levels of government.<sup>22</sup>

**Figure 1.2. Risk-informed sustainable development**



(Source: UNDRR 2019)

Though each agreement frames disaster risk and resilience from different perspectives, there is a common understanding that DRM is one of the prerequisites to building resilience. This is an imperative to achieving sustainable development and a reminder of how integrated the responses ought to be.<sup>23</sup> Reinforcing the point, the Secretary-General of the United Nations emphasized that DRR must be at the core of sustainable development strategies and economic policies if countries are to fulfil the commitment in the 2030 Agenda and ensure that “no one will be left behind”.<sup>24</sup>

## 1.2.2

### 2030 Agenda

Unlike HFA and the Millennium Development Goals, implementation of the 2030 Agenda and its SDGs have now been linked with the Sendai Framework. This was partly at the request of Member States to reduce the overlapping reporting burden by establishing common metrics and integrated reporting protocols (see Part II of this GAR), but also due to a wider shift in recognition that these agendas are mutually dependent in achieving their objectives (risk-informed sustainable development).

The 2030 Agenda and its SDGs build on the achievements of the Millennium Development Goals, and aim to go further towards ending all forms of poverty and promoting prosperity, peace and partnerships, while protecting the planet.<sup>25</sup> The 2030 Agenda recognizes the core role that risk reduction and resilience play in sustainable development policy, by making direct reference to the Sendai Framework, by adopting common indicators and by setting targets related to risk reduction in many SDGs.<sup>26</sup>

The adoption of common metrics for measuring the goals and targets of the two agreements and the development of mutually reinforcing implementation architectures (including common data and integrated monitoring and reporting protocols) support the prospect of a greatly enriched data environment. Disaggregated data sets and statistical data, hitherto scarce in the disaster risk realm, are now prerequisites for measuring risk-informed sustainable development. Consequently, the international statistical community has already been mobilized (see Chapters 7 and 9); improvements in data availability, quality and accessibility are anticipated as these capabilities are deployed and other resources (potentially through the global and national SDGs architecture) are made available to countries seeking to redress data and capacity gaps.

The expectation is that with an enriched data environment and enhanced assessment capabilities, there will be an improved understanding of the forensics of the aforementioned multidimensional disruptions. This also applies to the systemic dimensions so essential for a better anticipation of future opportunities, shocks, risks, precursor signals, correlations and trends.

## 1.2.3

### Paris Agreement

Disaster risk and resilience are encoded within the Paris Agreement. At the twenty-first Conference of the Parties in Paris in 2015, Parties to the United Nations Framework Convention on Climate Change (UNFCCC) welcomed the adoption of the Sendai Framework. Articles 2, 7, 8 and 10 of the Paris Agreement call for actions that have direct implications for disaster risk. In particular, the Sendai

**18** (United Nations General Assembly 2015b)

**19** (United Nations General Assembly 2016a)

**20** (Peters et al. 2016); (Murray et al. 2017); (Garschagen et al. 2018)

**21** (UNISDR 2015b)

**22** (Murray et al. 2017); (United Nations 2018)

**23** (Mercy Corps 2013); (IRDR and ICSU 2014); (Peters et al. 2016); (Benson 2016); (Hallegatte et al. 2017)

**24** (United Nations 2018)

**25** (United Nations 2015d)

**26** (UNISDR 2015b)

Framework notes that “disasters, many of which are exacerbated by climate change and which are increasing in frequency and intensity, significantly impede progress towards sustainable development.” The aim of holding the global average temperature this century below an increase of 2°C above pre-industrial levels requires systemic risk management on a scale never seen before, necessitating collective action to address the causal factors of natural and man-made hazards and risks. With countries’ nationally determined contributions (NDCs) of the Paris Agreement estimated by the Intergovernmental Panel on Climate Change (IPCC) to be leading the climate system to temperature increases of between 2.9°C and 3.4°C,<sup>27</sup> this would result in future hydrometeorological hazard intensities that surpass known experience and which alter loss and damage equations and fragility curves of almost all human and natural systems at risk.

The Paris Agreement recognized the need to address loss and damage associated with the effects of climate change. The agreement identified areas of cooperation central to DRR and called for investments to address the underlying risk drivers associated with rising greenhouse gas (GHG) emission levels and to inspire innovation and low-carbon growth.<sup>28</sup> However, with non-linear change in hazard intensity and frequency a reality,<sup>29</sup> much greater ambition and accelerated action is required pre-2030, so as to converge with the goal, outcome and targets of the Sendai Framework.

Building coherence between the Paris Agreement and the Sendai Framework is currently principally framed around commonalities of DRR and climate change adaptation (CCA). The two frameworks have the common objective of strengthening communities’ resilience across the full range of environmental, technological and biological hazards, so they build back better. Support for these objectives manifests through coordinated action between the United Nations Office for Disaster Risk Reduction (UNDRR), the Adaptation Committee of UNFCCC and the Least Developed Countries Expert Group, which is supporting mainstreaming DRR into national adaptation

programmes of action (NAPAs). Much more must be done to understand and integrate the consequences of simultaneous systemic change around energy, industrial, land, ecological and urban systems within ongoing vulnerability reduction measures of NAPAs, local adaptation programmes of action and DRR plans.

Adaptation has multiple connections with risk reduction processes at the local and regional levels, and will be most effectively pursued when integrated efforts reflect the important relationship between climate mitigation (and its associated risks, including technological risk), adaptation, hazard modification and vulnerability reduction.

Key to successful integration of the two frameworks will be the presence of clear governance arrangements and accountability mechanisms to ensure successful collective action and joined-up monitoring processes, thus minimizing the reporting burden on countries while learning from previous successes.

## 1.2.4

### Addis Ababa Action Agenda

AAAA proposes a global framework for financing sustainable development efforts post-2015. In paragraph 34, it refers to the Sendai Framework in its commitment to develop and implement holistic DRM at all levels in line with the Sendai Framework. It also supports national and local capacities in the development of integrated strategies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, and resilience to disasters. AAAA encourages the consideration of climate and disaster resilience in development financing (para. 62) and calls for innovative financing mechanisms that allow countries to better prevent and manage risks, and to strengthen the capacity of national and local actors to manage and finance DRR.<sup>30</sup>

AAAA highlights the importance of improving global economic governance to counter excessive

volatility and support sustainable development by underlining issues of coherence and consistency of international financial, monetary and trading systems. Commitments made by Member States primarily reflect challenges of systemic risk from regulatory monetary gaps and misaligned incentives in the financial sector and allow countries to plan more efficient responses to shocks and disasters. More fundamentally, AAAA summarized concerns over the sustainability of global economic growth in the face of increasing environmental, social and financial challenges. It provides a comprehensive set of policy actions with over 100 concrete measures to address the larger and more diverse financing needs associated with transforming the global economy and achieving SDGs.

AAAA calls on the international community to offer targeted support to countries whose domestic resources and debt sustainability are threatened by disasters, by encouraging tailor-made financial instruments.<sup>31</sup> Relevant examples on disaster risk include sovereign bonds linked to gross domestic product (GDP), the inclusion of “hurricane” or “catastrophe” clauses in loan contracts, countercyclical loans and weather-related insurance schemes. Member States also committed to intensify efforts towards domestic resource mobilization to develop fiscally sustainable social protection schemes by setting national spending targets for quality investment,<sup>32</sup> to support the most vulnerable in the aftermath of a disaster and allow access to essential public services for all. This translates to a global financial infrastructure that supports the special needs of countries most in need, least developed countries and small island developing States (SIDS), through coordinated policies aimed at fostering debt financing, debt restructuring, improved access to finance and domestic resource mobilization. AAAA made one

message clear with regard to financing for risk-informed development. While it remains important to address the short-term risks of today, decision makers must stay steadfast in promoting a long-term financing strategy to meet the environmental, social and economic challenges of tomorrow.

## 1.2.5

### New Urban Agenda

In its vision, principles and commitments NUA explicitly mentions DRR and resilience, and promotes proactive risk-based, all-hazard and all-of-society approaches. It calls for sustainable management of natural resources in cities to promote DRR by developing DRR strategies and assessing disaster risk periodically (para. 65). Moreover, it expresses Member State commitments to improve cities’ resilience to disasters by adopting approaches in line with the Sendai Framework (paras. 67 and 77).<sup>33</sup>

As NUA moves into an operational phase, significant opportunities to link more coherently to other agendas are apparent.<sup>34</sup> The synergies between NUA and the Sendai Framework provide the basis for expanded collaboration, including between the UNDRR-led Making Cities Resilient Campaign and the United Nations Human Settlements Programme (UN-Habitat). This pursues achievement of Target E of the Sendai Framework and the objectives of NUA, particularly on supporting cities in developing and integrating local DRR strategies into urban development plans.

<sup>27</sup> (IPCC 2018)

<sup>28</sup> (United Nations 2015c); (UNFCCC 2017)

<sup>29</sup> (IPCC 2018)

<sup>30</sup> (United Nations 2015a)

<sup>31</sup> (United Nations General Assembly 2015b)

<sup>32</sup> (United Nations 2015b)

<sup>33</sup> (United Nations 2016b)

<sup>34</sup> (Murray et al. 2017); (Garschagen et al. 2018)

## 1.2.6

### Agenda for Humanity

Reduction of risk and vulnerability on a global scale is a key message of the Agenda for Humanity, which calls for the anticipation and prevention of disaster and crises. It consists of five core responsibilities that are essential to achieve progress to address and reduce humanitarian need, risk and vulnerability, namely: political leadership to prevent and end conflict, leave no one behind, uphold the norms that safeguard humanity, change people's lives from delivering aid to ending need, and invest in humanity.

The Agenda for Humanity aims to reduce risk by promoting different ways of working together so as to transcend the humanitarian-development divide, and to ensure that investments in sustainable development are risk informed. These include: conducting risk and vulnerability analysis with development partners and local authorities, and strengthening existing coordination efforts to share analysis of needs and risks, and better align humanitarian and development planning tools and interventions.

Adopted in 2016, the Grand Bargain: A Shared Commitment to Better Serve People in Need<sup>35</sup>, recognizes that today's humanitarian challenges require new and coherent approaches that address the economic, social and political root causes of crises, conflict and disaster.

Enshrined in each of the above 2015 agreements is recognition of the systemic nature of risk, and so the call for a paradigm shift to adopt systems-based approaches and work in new ways to collaboratively reduce the creation of new risk and manage the existing stock of risk.

---

<sup>35</sup> (Agenda For Humanity 2019)