

RESEARCH BRIEF

Achieving coherence between data policies for reporting against the Sendai Framework and the Sustainable Development Goals

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CONCEPT

DEFINING IDEAS

The Sendai Framework for Disaster Risk Reduction is a voluntary United Nations agreement which was signed by 187 UN member states.¹ It offers governments the opportunity to enhance their disaster risk reduction capacities by ensuring a role for multi-hazard management of disaster risk in all countries, at all scales and across all sectors. It covers all hazards and disaster scenarios such as: small-scale and large-scale, frequent and infrequent, sudden and slow-onset, caused by natural or man-made hazards as well as related environmental, technological and biological hazards and risks. Yet, rather than focusing exclusively on the response to emergencies, it recognizes that by reducing and managing conditions of hazard, exposure, and vulnerability — while building the capacity of communities and countries for prevention, preparedness, response, and recovery — losses and impacts from disasters can be effectively alleviated.² By 2030, the framework calls for:

‘The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.’

Loss data underpins all effective activity in disaster risk reduction and emergency management.³ In the words of Margareta Wahlström, the former Special Representative of the Secretary-General for Disaster Risk Reduction and Chief of UNISDR:

“Access to information is critical to successful disaster risk management. You cannot manage what you cannot measure.”⁴

Nonetheless, understanding what is currently lost or affected by disasters is highly complex. The number and scope of organisations and disciplines involved in disasters is large, and the different ways in which they approach loss measurement can prove challenging to manage. Historically, there has been wide variance in the assessment methods of disaster impact as different definitions, data sources and methods have been employed, resulting in data which cannot be easily compared geographically or over time.⁵

The Sendai Framework was adopted in 2015, the same year that several other UN Landmark agreements were launched, including: the Sustainable Development Goals (SDGs), COP21’s Paris Climate Conference, the World Humanitarian Summit and Habitat III. As illustrated in Figure 1, many of these agreements have been borne out of previous incarnations. Yet, the synchronous adoption of these multiple international agreements is somewhat unprecedented, and has helped to both create momentum as well as the unique opportunity to coordinate and build coherence across overlapping policy areas.⁶ For example, the global increase of natural disasters such as earthquakes, tsunamis, riverine flooding, cyclonic winds, storms, droughts, and heat waves is related to climate change.⁷ In this regard, climate change acts as a ‘force multiplier’, exacerbating many of the world’s global health challenges; climate change mitigation and adaptation will therefore be an important component of disaster risk reduction strategies.⁸ Furthermore, natural hazards are global, on the increase, and undermine poverty eradication and economic resilience. Reducing the risk of disasters will be critical to the achievement of sustainable development.

The Sendai Framework and SDGs are associated with established goals and indicators, which can be used by countries to monitor their progress in addressing global challenges. Not only do explicit goals and indicators help to shed a spotlight on concerns which are universal to all countries, they can act as a catalyst to accelerate change; their high public profile helps to attract political commitment and financial resources.⁹

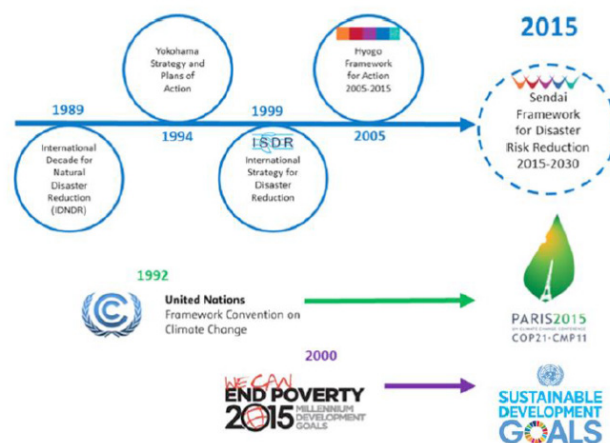


Figure 1. Twenty five years of international commitments to disaster risk reduction. Reproduced from Launch of the 2015 Global Assessment Report on Disaster Risk Reduction by Andrew Maskrey, 2015, Geneva, Switzerland: UNISDR. Reproduced with permission.

However, in order for countries to report their progress against these, robust data and information systems will be crucial. Currently, data systems cannot fulfil reporting requirements, mandating a call for ‘a data revolution, rigorous accountability mechanisms and renewed global partnerships.’¹⁰

Joined-up monitoring processes which track progress on the implementation of frameworks will not only help minimise the reporting burden on countries, but will make data collection more feasible as well as practical, in terms of making use of limited resources.

The purpose of this policy brief is therefore to discuss how governments can achieve coherence between data reporting against the Sendai Framework for Disaster Risk Reduction and the SDGs.

METHODOLOGY: RESEARCH DESIGN AND INQUIRY

The Sendai Framework outlines clear Global Targets (See Box 1). The indicators associated with these targets were recently adopted by the UN General Assembly on 2nd February 2017.² Many of the Global Targets are directly related to health in terms of reducing: disaster mortality, the number of affected people, and disruption to health facilities. Annex 1 contains the full list of Sendai indicators.

The Sustainable Development Goals are a set of seventeen aspirational global goals (see Box 2) with 169 targets between them, including: the universal call to action to end poverty, protect the planet from climate change and ensure that all people enjoy peace and prosperity.¹¹

Box 1: Sendai Framework Global Targets

Substantially reduce global disaster mortality by 2030, aiming to lower the average per 100,000 global mortality rate in the decade 2020–2030 compared to the period 2005–2015;

(b) Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 in the decade 2020–2030 compared to the period 2005–2015;

(c) Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030;

(d) Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;

(e) Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;

(f) Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of the present Framework by 2030;

(g) Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.

Box 2: The Sustainable Development Goals



Synergies with the monitoring of these international frameworks have already been recognised by the international community. Box 3 gives an example:

Box 3: Example of overlap between SDG and Sendai targets

The SDG target 13.1 (Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries) is addressed by the Sendai proposed indicators under Global Targets A and B: 'Number of deaths, missing persons and persons affected by disaster per 100,000 people;' and Global Target E 'Number of countries with national and local disaster risk reduction strategies;' and 'Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with the Sendai Framework.'

The UN Statistical commission has recently confirmed indicators developed by the Inter-Agency and Expert Group on the SDGs, and this process is being closely coordinated with the Sendai Framework.¹² This includes ensuring commonality of the characteristics used to disaggregate data for both frameworks. In addition, a number of recent workshops and events have provided further clarification on the collection and reporting of data under both frameworks, namely the May 2017 UNISDR Global Platform in Cancun, Mexico and the December 2017 UNISDR agreement in Bonn to formulate a reporting and monitoring taskforce.

However, despite attempts to ensure coherence, significant challenges in the collection, recording and reporting of data remain. These are discussed below in the key findings.

KEY FINDINGS

Coherence can be found in several ways including: common data principles and reporting mechanisms; political recognition of the Sendai Framework and the importance of disaster risk reduction within the SDGs; and finally in initiatives and partnerships that can cover implementation of the goals and targets of the post-2015 Development Agenda.

COMMON DATA PRINCIPLES AND REPORTING MECHANISMS

- **Common data principles.** Data quality varies from country to country and even between local entities. Currently, there is no standard that introduces a reasonable level of comparability into the resulting assessment results. This leads to gaps and overlaps in the data, and biases that ultimately affect the quality of research conducted and policies made on the basis of the data, particularly at the global level. As seen with the predecessors of the SDGs, the Millennium Development Goals (MDGs), there was too little investment in strengthening statistical capacity to ensure effective monitoring and establish statistical standards and quality requirements.¹⁴
- **Common data reporting.** Establishing common definitions of data required exist between the SDGs and Sendai Framework will be necessary to ensuring the standardization of data collection, recording and reporting. For example, attributing mortality and morbidity to disasters (measured by Targets A and B of the Sendai Framework) can be complex given the multiple indirect, as well as direct, impact pathways. With slow-onset hazards such as droughts, health effects may be mediated through the disruption to basic health care and spread of communicable diseases.¹⁵ Other challenges with data reporting common to both frameworks are noted in Box 4.

Baselines: Progress and change can only be monitored if there is a baseline. For example, in the Sendai targets, countries are expected to report on loss data for the period 2005–2015 to enable comparison with data from 2015 to 2030 per 100,000. However, the collection of historic loss data will require an investment of time and resources, and may not be possible for countries currently lacking the necessary data infrastructure. The Global Burden of Disease (GBD) study, led by the Institute for Health Metrics and Evaluation, is a potential resource to understand trends in disaster-related mortality.¹⁶ The GBD study is the most comprehensive worldwide epidemiological study in existence, with a description of mortality from a variety of causes at global, national and regional levels. The extraction of baseline health measurements for some of the Sustainable Development Goals from the GBD is already being explored.¹⁷

Timeliness: Real-time monitoring is crucial for data to be a useful management and policy tool. However, high frequency monitoring (even on an annual basis) can be resource-intensive to implement.

Disaggregation: A key theme of the post-2015 agenda is to “leave no one behind”.¹⁸ This phrase recognises that the dignity of the individual is fundamental and that the Agenda’s Goals and targets should be met for all nations and people and for all segments of society. Ensuring that these commitments are translated into effective action requires a precise understanding of target populations. Aggregated data may mask inequalities within vulnerable groups that, unless disaggregated, will remain hidden to policymakers. However, disaggregated data is harder to obtain as it requires more time and thought during the collection and further granularity during analysis and reporting.

POLITICAL RECOGNITION

- **High-level political engagement.** There is currently still a political gap in ensuring alignment between the different frameworks. It will be necessary to demonstrate the synergies between frameworks and efficiencies which can be realised in ensuring coordination. For example, by integrating Sendai Framework discussions into SDG data advising at the country level.
- **Political will to enhance investment into the required data infrastructure.** Massive data gaps are among the most pressing challenges confronted by many developing countries. Data generation requires capacity-building and infrastructure, which many countries have not been able to invest in. For instance, though the World Health Organization (WHO) regularly receives cause-of-death statistics from about 100 Member States, two-thirds (38 million) of 56 million annual deaths are still not registered.¹⁹ Yet cause of death is needed to report against both the SDGs and the Sendai Framework, as noted in the example given in Box 3.

INITIATIVES AND PARTNERSHIPS

- **Multidisciplinary and institutional partnerships.** Data required for reporting progress against both the Sendai framework and SDGs are often collected and stored by different organizations. Therefore sharing technology and innovations for the common good through the creation of a global network to bring together organizations and experts for providing technical guidelines to ensure that data provided in support of the indicators for the Sendai Framework and SDGs are as reliable and usable as possible. For example, several independent programmes focussing on measuring progress on health and well-being are relevant to a number of targets in the SDGs and the Sendai Framework and offer potential support and collaboration. These include The Lancet Countdown: Tracking Progress on Health and Climate Change²⁰ and aforementioned Global Burden of Disease (GBD) Study.²¹

POLICY IMPLICATIONS FROM RESEARCH

In order to continue to build coherence in data reporting between the Sendai Framework and the SDGs, the following recommendations are therefore proposed:

- Raising awareness with national and sub-national governments on how the different frameworks align is critical. Given the higher international and political profile of the SDGs, the SDG community needs to be sensitised to the Sendai Framework and actively consider coherence with it as they advocate for SDG data system improvements. This combination will in turn serve to reduce fragmentation and duplication.
- For example, criteria for projects developed by donors and regional development banks should recognise and reward initiatives designed in ways that deliver progress on multiple goals and targets, and major conferences designed to review progress on the frameworks should include special high-level sessions with counterparts from SDGs and Sendai, to incentivise and plan for greater coherence.²²
- Facilitating key partnerships which help avoid duplication and maximise gains. Governments are not the sole producers of data; private companies, universities and other third-party actors may offer other sources of data which can be used to augment or validate official reporting systems. For example, forging partnerships with the GBD study and World Health Organization's 'Global Reference List of 100 Core Health Indicators',²³ which aims to contribute to greater alignment between countries on the reporting of health trends, may help to respond to the data needs of both frameworks. Building interoperability into existing systems may also enhance such partnership working.
- Instituting clear governance arrangements to ensure successful collective action and accountability. For example, by incorporating disaster risk reduction/emergency response into the remit of those leading on SDG implementation within government.
- Developing technical guidance documents to enable all countries to report against indicators in a standard way. This would include

ensuring consistency between definitions featuring across both of the agreements.²⁴

- Providing Member States with technical support, upon request, to conduct a review of data readiness with respect to the indicators in order to establish a baseline for monitoring and prepare for reporting against the Sendai Framework and the SDGs.

LINGERING QUESTIONS

Research which builds the evidence underlying the policy recommendations above should be prioritized. Potential research gaps to be addressed include:

- A stakeholder analysis which identifies the roles and responsibilities of different actors at the national, regional and global levels in reporting against the agreements. This will provide an overview of the architecture capable of responding to the data requirements.
- Convening bodies responsible for overseeing the international frameworks should map exactly how each of the goals, targets and indicators across the frameworks relates to the others – including points of coalescence and of difference.²⁵ A robust mapping of the common data requirements between the post-2015 agenda agreements and existing data sources at the national, regional and global levels to ensure cost-effectiveness and avoid duplicative systems. The Lancet countdown has already commenced such an exercise, and illustrates which indicators could potentially hit a majority of targets.²⁶
- Research into innovative practices in using "big data", information and communication technology within developing countries as a way of improving their capacity to monitor progress against the agreements. For example, big data can be used to increase data availability and support simultaneous monitoring and reporting against the SDGs and Sendai Framework

References

1. UNISDR (United Nations International Strategy for Disaster Reduction). 2015. Sendai framework for disaster risk reduction 2015–2030. Available at: http://www.wcdrr.org/uploads/Sendai_Framework_for_Disaster_Risk_Reduction_2015-2030.pdf. [Accessed 24th August 2017]
2. UNISDR (United Nations International Strategy for Disaster Reduction). 2015. Sendai framework for disaster risk reduction 2015–2030. Available at: http://www.wcdrr.org/uploads/Sendai_Framework_for_Disaster_Risk_Reduction_2015-2030.pdf. [Accessed 24th August 2017]
3. Green Paper. Increasing Availability, Quality, and Accessibility of Common and Fundamental Operational Datasets to Support Disaster Risk Reduction and Emergency Management in the Philippines (2014) Available at: http://www.gaia-geosystems.org/PROJECTS/SIEM/PHL/Green_Paper_DSWD-SIEM_305014.pdf [Accessed 22nd February 2017]
4. UNISDR (2012, September 21) Governments must recognize their stock of risk - MDG Report. Available at: <http://www.unisdr.org/archive/28569> [Accessed 22nd February 2017]
5. Measuring the Human and Economic Impact of Disasters. Government of Science. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/286966/12-1295-measuring-human-economic-impact-disasters.pdf [Accessed 22nd February 2017]
6. Murray V, Maini R, Clarke L, Eltinay N. Coherence between the Sendai Framework, the SDGs, the Climate Agreement, New urban Agenda and World Humanitarian Summit and the role of science in their implementation, ICSU and IRDR. Available at: <http://www.irdrinternational.org/2017/05/12/irdr-published-5-policy-briefs-for-2017-global-platform-for-drr/> [Accessed 24th August 2017]
7. Thomas V, López R. Global Increase in Climate Related Disasters: Asian Development Bank (2015). Available from: <https://www.adb.org/sites/default/files/publication/176899/ewp-466.pdf> [Accessed 24th August 2017]
8. Patz JA, Frumkin H, Holloway T, Vimont DJ, Haines A. (2014) Climate change: challenges and opportunities for global health. JAMA. 312(15):1565-80.
9. Maini, R., Clarke, L., Blanchard, K. and Murray, V., The Sendai Framework for Disaster Risk Reduction and Its Indicators—Where Does Health Fit in?. International Journal of Disaster Risk Science, pp.1-6.
10. UN (2015) The Road to Dignity by 2030: Ending Poverty, Transforming All Lives and Protecting the Planet Synthesis Report of the Secretary- General on the Post-2015 Agenda.
11. United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. Available at: <http://www.preventionweb.net/publications/view/45418>. [Accessed 24th August 2017]
12. UNSTATS (2017). SDG indicators. Metadata repository. Available at: <https://unstats.un.org/sdgs/metadata/> [Accessed 9th August 2017]
13. Fakhruddin B, Maini R, Murray V. Disaster Loss Data in monitoring the implementation of the Sendai Framework. ICSU and IRDR. Available at: <http://www.irdrinternational.org/2017/05/12/irdr-published-5-policy-briefs-for-2017-global-platform-for-drr/> [Accessed 24th August 2017]
14. Indicators, S.D.S.N., 2015. a monitoring framework for sustainable development goals: launching a data revolution for the SDGs. Sustainable Development Solutions Network.
15. Stanke, C., M. Kerac, C. Prudhomme, J. Medlock, and V. Murray. 2013. Health effects of drought: A systematic review of the evidence. PLOS Currents Disasters. doi:10.1371/currents.dis.7a2cee9e980f91ad7697b570bcc4b004.

16. Wang, H., Naghavi, M., Allen, C., Barber, R. M., Bhutta, Z. A., Carter, A et al. (2016). Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980–2015: a systematic analysis for the Global Burden of Disease Study 2015. *The Lancet*, 388(10053), 1459-1544.
17. Lim, S.S., Allen, K., Bhutta, Z.A., Dandona, L., Forouzanfar, M.H., Fullman, N., Gething, P.W., Goldberg, E.M., Hay, S.I., Holmberg, M. and Kinfu, Y. (2016) Measuring the health-related Sustainable Development Goals in 188 countries: a baseline analysis from the Global Burden of Disease Study 2015. *The Lancet*, 388(10053), pp.1813-1850.
18. Global Sustainable Development Report and Building the Common Future We Want. Available at: <https://sustainabledevelopment.un.org/content/documents/975GSDR%20Executive%20Summary.pdf> [Accessed 24th August 2017]
19. World Health Organization (WHO) (2014) Fact Sheet No 324 “Civil registration: why counting births and deaths is important”.
20. Watts, Nick et al. (2016) The Lancet Countdown: tracking progress on health and climate change. *The Lancet* , Volume 389 , Issue 10074 , 1151 - 1164
21. Wang, H., Naghavi, M., Allen, C., Barber, R. M., Bhutta, Z. A., Carter, A et al. (2016). Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980–2015: a systematic analysis for the Global Burden of Disease Study 2015. *The Lancet*, 388(10053), 1459-1544.
22. Briefing. (2016) Resilience across the post-2015 frameworks: how to create greater coherence. Available at: <http://www.odi.org/sites/odi.org.uk/files/resource-documents/11006.pdf> [Accessed 9th August 2017]
23. World Health Organization (WHO) (2015) Global Reference List of 100 Core Health Indicators. Available at: <http://www.who.int/healthinfo/indicators/2015/en/>
24. ODI Briefing. (2016) Resilience across the post-2015 frameworks: how to create greater coherence. Available at: <http://www.odi.org/sites/odi.org.uk/files/resource-documents/11006.pdf> [Accessed 9th August 2017]
25. ODI Briefing. (2016) Resilience across the post-2015 frameworks: how to create greater coherence. Available at: <http://www.odi.org/sites/odi.org.uk/files/resource-documents/11006.pdf> [Accessed 9th August 2017]
26. Watts, Nick et al. (2016) The Lancet Countdown: tracking progress on health and climate change. *The Lancet* , Volume 389 , Issue 10074 , 1151 - 1164