



POLICY BRIEF

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SDGs, DRR and CCA: Potential for Strengthening Inter-linkages

Key Messages

- 📶 The world has arrived at a crucial turning point with the inception of three major global frameworks dedicated to sustainable development (SD), disaster risk reduction (DRR) and climate change adaptation (CCA). A coordinated response is now needed from all relevant stakeholders to maximise implementation on the ground.
- 📶 At the global level, while SD, DRR and CCA interlinkages are acknowledged, DRR is weakly linked to the Paris Agreement. Linking CCA with DRR by strengthening national and local level adaptation planning and implementation would assist here, and loss and damage can provide ample opportunities for this to take place.
- 📶 At the national level, the economic aspect is key to sustainable development in many countries—DRR and CCA can assist in economic development objectives of most developing and least developed countries without compromising environmental integrity or increasing disaster risk.
- 📶 At the local level, strong convergence of SD, DRR and CCA calls for greater collaboration among related stakeholders with adaptive management—not just in drafting broad plans and policies but also actual implementation, monitoring and evaluation, via collaboration among local governments, local experts, non-government organisations and business sectors.
- 📶 This policy brief identifies approaches that could help achieve better synergies in implementation of these frameworks on the ground via programmatic integration, collaboration, capacity and innovation. Focal Points at national and sub-national levels could mainstream and monitor progress of indicators and targets in the three frameworks, as well as ensure convergence of these frameworks takes place on the ground.



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I Context

There is indisputable evidence linking development with the state of the environment and disasters (Shaw and Tran 2012, Tran et al. 2009, Srinivas and Nakagawa 2007, Schipper and Pelling 2006), which implies that if development were made sustainable (SD) this would reduce pressure on the environment and subsequent impacts in the form of disasters. In turn, a succinct approach to disaster risk reduction (DRR) as well as environmental management can further reduce the potential impacts of disasters on development and help make development sustainable. Synergies between Climate Change Adaptation (CCA) and appropriate DRR measures are required, as climate change poses a key obstacle to development and also impacts on disaster risk (Prabhakar et al. 2015).

In line with the urgency for progress on SD, DRR and CCA, 2015 has been a landmark year in the history of development, disaster and environment fields with the creation of three major international frameworks. It started with adoption of a new DRR framework in March 2015 in Sendai, Japan, called the Sendai Framework for Disaster Risk Reduction (SFDRR), covering 2015 to 2030 (UN 2015a), then a new set of development goals—the Sustainable Development Goals (SDG) (same timeframe; 2015 to 2030)—were adopted by the UN General Assembly in

New York in September (UN 2015b), and finally a new climate change agreement—the Paris Agreement—under the UNFCCC (United Nations Framework Convention on Climate Change), was initially agreed in December (UN 2015c), and needs to be ratified between 22 April 2016 and 21 April 2017.

Along with the adoption or near-adoption of these major frameworks, however, are concerns as to how they will converge on the ground and how effectively they can be implemented, while concurrently maximising their synergies and overall CCA, DRR and SDG outcomes. Bearing in mind how important it is that these frameworks create action at ground level, and of the opportunity for intervention to improve synergy, this policy brief provides some suggestions that can better knit these three frameworks and approaches (SDG, DRR and CCA) together. It recognises the limited progress in collaboration among relevant stakeholders engaged in CCA, DRR and SD and calls for more action toward successful implementation of solutions on the ground. After overviewing these three domains and their interlinkages, it analyses the potential to promote synergy at regional and national levels with the emphasis on local-level implementation, suggestions for which form the conclusion.

2 Evolution of SDGs, DRR and CCA Domains and Interlinkages

2.1 Sustainable Development Goals

The 17 SDGs and 169 targets lie at the heart of the newly-agreed on development framework (figure 1). The key issues are *“to eradicate poverty and hunger in all forms, to combat inequalities within and among countries, to build peaceful, just and inclusive societies, to protect human rights and promote gender equality and the empowerment of women and girls, and to ensure the lasting protection of the planet and its natural resources by 2030”* (UN 2015b), which resulted from two years of intensive public consultations and engagement between states, civil society and other stakeholders. The SDGs succeed

the Millennium Development Goals (MDGs; a global development framework with 8 goals, 21 targets and 60 indicators), progress in which has varied across countries, continents and goals—Africa, least developed and landlocked developing countries, and small island developing states have not sufficiently attained the goals, particularly those relating to maternal, newborn and child health and reproductive health (UN 2015b).

Although climate change issues are not explicitly laid out in the MDGs, disaster issues are briefly covered in Goal 7: “Ensure Environmental



Figure 1 The 17 Sustainable Development Goals (source: available at Globalgoals.org)

Sustainability”, and form Goal 1 of the SDGs in relation to exposure of the poor and vulnerable to disaster risks. DRR is highlighted in Goal 11: “Make cities and human settlements inclusive, safe, resilient and sustainable”, which also calls for a focus on disaster resilient cities and human settlements, as well as carrying out DRR at all levels. Similarly, climate change issues are dealt with as separate Goal 13: “Take urgent action to combat climate change and its impacts”, for which a specific annual fund target of USD100 billion has been set for 2020.

2.2 Disaster Risk Reduction

The DRR concept has evolved over the last 25 years since its inception as the first UN resolution in

1985, which established 1990 as the International Decade of Natural Disaster Reduction (IDNDR). It then evolved into the International Strategy for Disaster Reduction (ISDR) from 2000 (figure 2). The first global framework on DRR was established in 2005 as the Hyogo Framework for Action (HFA), with five priorities: 1) institutionalise DRR efforts; 2) identify, assess, monitor disaster risks; 3) use knowledge, innovation and education to build a culture of safety; 4) reduce underlying risk factors; and 5) strengthen disaster preparedness for effective responses. Of these, number 4 (underlying risk factors) is devoted to development issues (poverty, sanitation, health, etc.) and also links to climate change impacts (UN ISDR 2005).

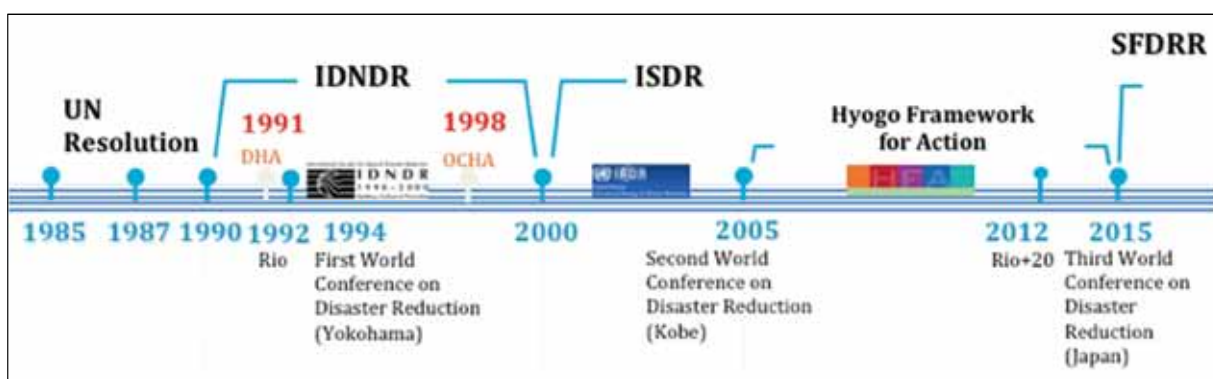


Figure 2 Evolution of the Disaster Risk Reduction Field

SFDRR, in contrast, has four priority areas (figure 3) and seven global targets (1. reduce mortality, 2. reduce number of affected people, 3. reduce direct disaster economic losses, 4. reduce critical infrastructure disruption, 5. increase number of countries with national DRR strategy, 6. enhance international cooperation for actions, and 7. access

to multi hazard early warning system) (UN ESCAP 2016). Development issues are directly related to priority 1 as well as 3. SFDRR is characterised by its strong focus on stakeholder roles, such as civil society organisations, voluntary groups, academia, science and technology groups, the business community and the private sector.



Figure 3 SFDRR Priority Areas and Role of Stakeholders

2.3 Climate Change Adaptation

Unlike the previous two fields, climate change adaptation lacked a concrete global consensus on its framework, although programmes such as the Nairobi Work Programme, comprehensive climate change action plans such as the Bali Action Plan and agreements such as Cancun Agreements and Paris Agreement took place. Climate change issues were mainly dominated by mitigation options and cost-sharing negotiations in the early days after establishment of the UNFCCC; however, along with the rise in climate related hazards, adaptation started attracting more attention at COP 10 (Conference of the Parties in 2004; Buenos Aires, Argentina), then received successive boosts from the adoption of Bali Action Plan in 2007 (Kato 2010) and the following COPs in Cancun (Mexico) and others leading up to

the Paris Agreement, which is where we are now.

Figure 4 depicts the key points of the Paris Agreement (UN 2015c), which emphasises adaptation and loss and damage issues. Article 7 focuses entirely on adaptation issues. The Agreement acknowledges the significant need for adaptation and urges governments and related stakeholders to undertake measures that embody the Cancun Adaptation Framework for sharing information, strengthening institutional mechanisms, strengthening scientific knowledge, assisting developing countries in identifying suitable adaptation practices, and improving effectiveness and durability of adaptation actions.

There is a need for closer collaboration between CCA and DRR communities, which will be realised through the Agreement's focus on loss and damage

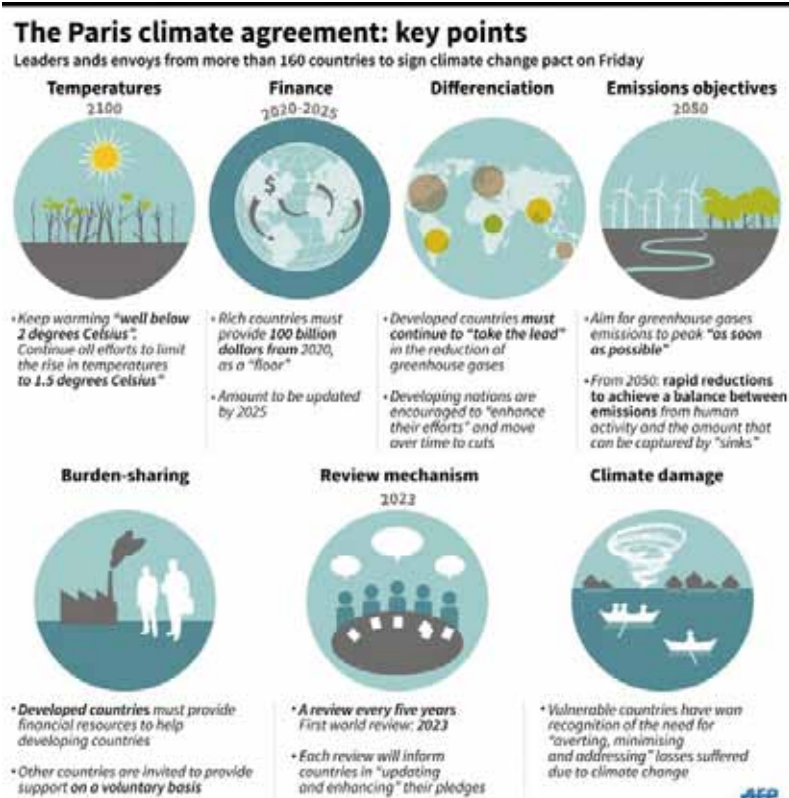


Figure 4 Highlights of Paris Agreement (source: Infographic by Jonathan Storey, AFP)

(see box 1). Under the UNFCCC, loss and damage was categorised as ‘Loss and damage associated with the adverse effects of climate change’ and was

often situated within the context of extreme events (Prabhakar et al. 2016).

Box 1 Loss and Damage can Unite CCA and DRR Communities

Loss and damage (L&D) associated with climate change impacts has emerged as a key issue underpinning climate change adaptation at the global level during recent climate change negotiations under UNFCCC. L&D could also unite CCA and DRR communities in several ways—mainly via DRR’s familiarity with assessments and solutions, which could be capitalised on by the CCA community and integrated into its strategies. In turn, CCA communities can relay their familiarity with climate change implications for disasters to DRR communities.

2.4 Interlinkages Acknowledged but Underrepresented

A simple analysis of the instances of “sustainable development”, “disaster risk” and “climate change” in the three documents mentioned above (UN 2015 a, b and c) is depicted in figure 5, where line thickness indicates the extent to which each framework refers to or acknowledges keywords of SD, disaster risk and climate change. DRR receives high recognition in the SDG Agenda. Targets for achieving nine out of 17 SDGs have elements of DRR, including SFDRR targets embedded in them.

Although the phrase “sustainable development” is well embedded in the SFDRR and Paris Agreement, “disaster risk” only features moderately in SDG documents and is underrepresented in the Paris Agreement, as indicated by the thinnest line in figure 5. Conversely, the key phrase “climate change” is well embedded in both SDG and SFDRR, which indicates that the usage of key phrases in SDG and SFDRR is balanced, but the low appearance of disaster risk issues in the Paris Agreement mean they are underrepresented.

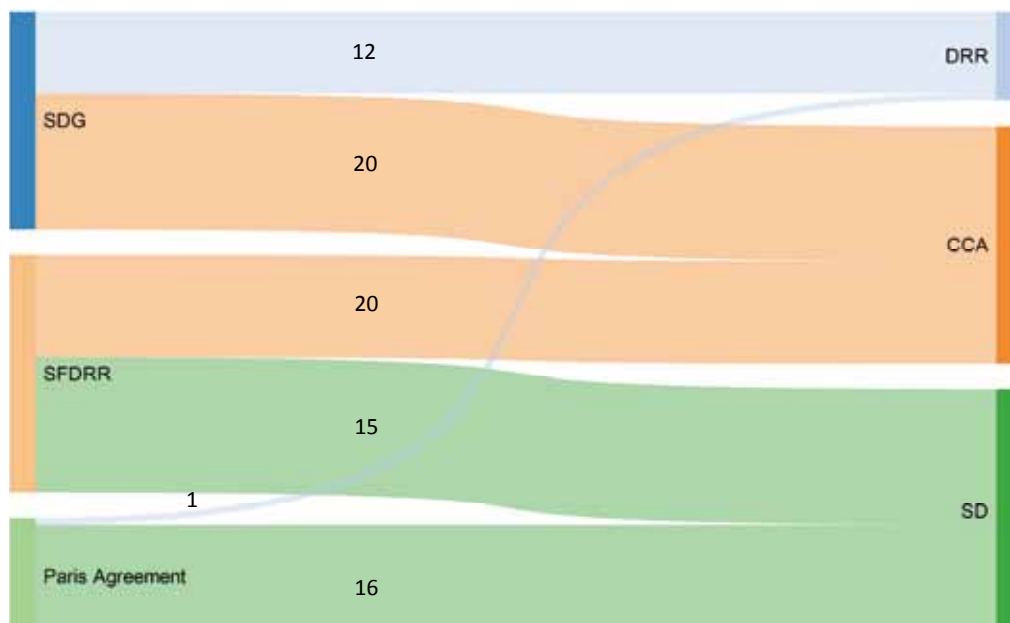


Figure 5 Strength of SD, DRR and CCA Linkages in the Three Global Frameworks

3 Scope of Synergy at Regional and National Level

3.1 Regional Example of ASEAN

ASEAN is a unique example of development, DRR and climate change integration. For MDGs, incorporation of developmental issues in the ASEAN joint declaration occurred as late as 2009; however, for SDGs, incorporation of the goals took place quickly due to high-level expressions of commitment and swift policymaking (Olsen et al., 2015). In the case of implementation, the ASEAN national Focal Points for SDGs are the key organisations in each country. UN ISDR (2010), in its analysis of institutional regional landscapes of CCA and DRR, has pointed out that within ASEAN separate departments individually focus on CCA and DRR, but while a regional agreement exists for DRR (ASEAN Agreement on Disaster Management and Response) it does not for CCA. To plug this gap, the UN analysis identified several

entry points to enable cooperation between DRR and CCA—which are environmental and health impact assessments, food, water and human security and ecosystem-based approaches. Therefore, while there are separate Focal Points, awareness needs to be raised at the policymaking level and more synergy is needed between regional activities under SDG, CCA and DRR.

3.2 National Level

To get a grasp of synergy at the national level, six countries (those highly vulnerable to natural disasters and climate change impacts) were chosen from developing, developed and island states to evaluate the extent of SDG fulfilment in national DRR frameworks, strategies and plans (see the footnote under table 1). The results are shown in table 1.

Table 1 SDG Synergy of Selected National Disaster Risk Reduction Frameworks, Plans and Strategies¹

| SDGs | Level of SDG incorporation in disaster risk reduction frameworks, plans and strategies | | | | | |
|---------|--|------------|------|-------|-------|-------------|
| | Australia | Bangladesh | Fiji | India | Japan | Philippines |
| Goal 1 | △ | ◎ | × | ○ | × | ◎ |
| Goal 2 | ○ | ◎ | ○ | △ | ○ | △ |
| Goal 3 | △ | ○ | ○ | ◎ | ◎ | ○ |
| Goal 4 | ◎ | ○ | ○ | ◎ | ◎ | ○ |
| Goal 5 | ○ | ○ | △ | ○ | ◎ | ○ |
| Goal 6 | △ | ○ | ◎ | ○ | ◎ | ◎ |
| Goal 7 | × | × | × | △ | ◎ | × |
| Goal 8 | ○ | ○ | △ | △ | ◎ | ○ |
| Goal 9 | ○ | △ | ○ | ○ | ◎ | ○ |
| Goal 10 | ○ | △ | △ | △ | △ | × |
| Goal 11 | ○ | ◎ | ○ | ○ | ◎ | ◎ |
| Goal 12 | △ | × | × | × | ○ | × |
| Goal 13 | ◎ | ◎ | × | ○ | △ | ◎ |
| Goal 14 | ◎ | × | △ | ○ | △ | ○ |
| Goal 15 | ○ | × | △ | × | △ | ○ |
| Goal 16 | ◎ | × | × | ○ | ○ | × |
| Goal 17 | ◎ | × | △ | ◎ | ○ | △ |

Key: ◎: strongly incorporated; ○: incorporated; △: weakly incorporated; ×: not incorporated. Refer to figure 1 for the SDGs listed in the first column.

Resources used for the above evaluation: Australia: National Strategy for Disaster Resilience (Council of Australian Governments, 2011); Bangladesh: Bangladesh National Parliament (2012) and NPDM (2010); Fiji: Fiji National Disaster Management Plan (Fiji, 1995); India: National Policy on Disaster Management, 2009 (National Disaster Management Authority, 2009); Japan: Central Disaster Management Council (2015); Philippines: NDRRMP, 2011

Overall, Japan’s Basic Disaster Management Plan followed by Australia’s National Strategy for Disaster Resilience have the most interlinkages with SDGs compared to the three developing countries presented in table 1, with Fiji’s national disaster management plan having the least. This trend appears to be related to the size of these countries’ economies in terms of GDP, indicating a strong relationship between economic development, DRR and SD (refer to figure 6 based on data from The World Bank, 2016). The analysis presented in figure 6 indicates a strong

relationship between economic development and the degree of DRR incorporation of SD elements². Though based on a limited set of countries, the relationship between economic development and level of SD incorporation indicates that there could be an optimal level of economic development that enables SD readiness of DRR plans and policies in countries. The reason behind this strong linkage could be attributed to enhanced investments in DRR due to the higher economic costs resulting from disasters occurring in richer countries (Vorhies 2012).

¹ This table was compiled by the authors by analysing the DRR strategies, plans and policies of the six countries listed and rating them on the four-point scale shown below the table. Judgement of the extent to which these strategies, plans and policies address the targets mentioned in the 17 SDGs was left to the discretion of the authors and hence should be considered a qualitative evaluation.

² The Y axis in figure 6 (DRR incorporation of SD elements) is derived from the sum of the numerical transformation of the scores presented in table 2. ◎ is represented as 4, ○ as 3, △ as 2 and × as 1.

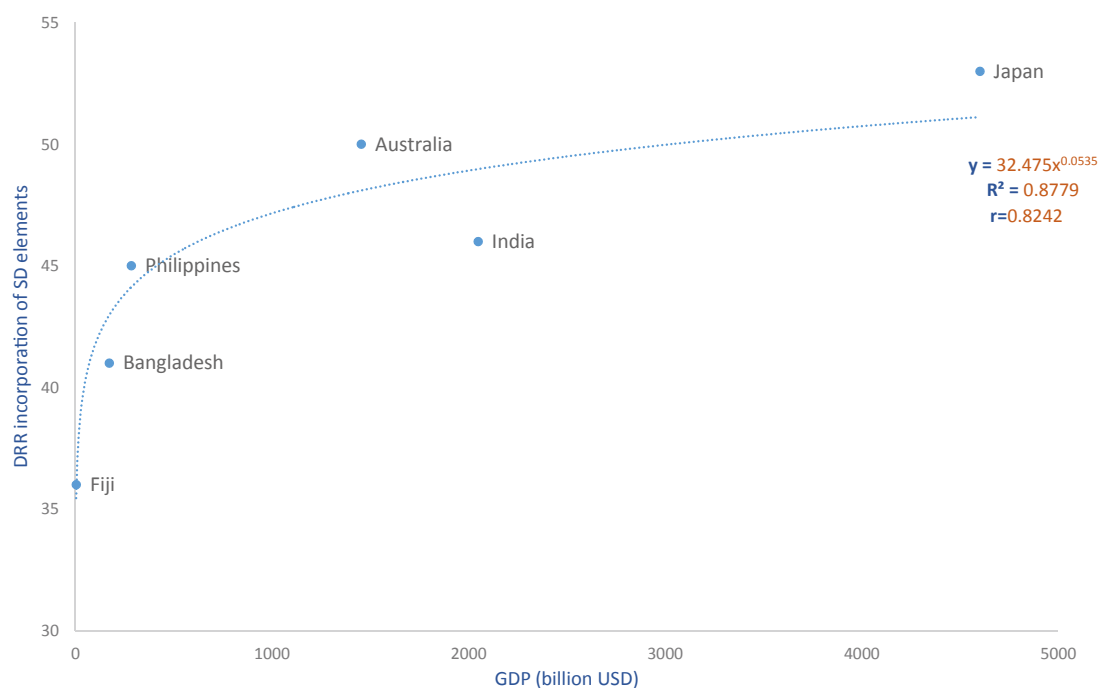


Figure 6 Power Regression between GDP and DRR Incorporation of SD Elements in DRR Plans of Selected Countries

Note: Values on the Y axis were obtained by numerical transformation of indicators presented in table 1².
Data source: The World Bank 2016.

Of all the countries, both India and Bangladesh gave relatively less consideration to biodiversity and ecosystem aspects, while Australia and the Philippines attached more weight to them. Australia’s approach to addressing natural disasters has centred on building resilience into the social, natural and built environments, and highlights the shared responsibility of society at large in building a resilient society; it also emphasises education, networks and building institutions to promote resilience. As a major shortfall, however, its disregard for clean energy in promoting disaster resilience could be cited—an issue shared by most of the other countries listed in table 1. Both India and Australia place strong emphasis on education and networks for DRR.

In Bangladesh, DRR plans give lower consideration to coastal areas, even though the country depends heavily on coastal resources and is subjected to coastal hazards. DRR plans also tend to follow national developmental priorities, which are poverty and hunger, owing to the government’s nomination of Ministry of Food as the Focal Point for DRR in the country. This case is unique and contrasts with that of

India and other countries, where nodal ministries tend to be home affairs or internal affairs, and could assist Bangladesh in addressing its basic development needs much more effectively.

Differences in DRR plans have been identified across developing and developed countries—for instance, Japan’s DRR plan includes more sustainable actions, such as ensuring sustainable energy, consumption and production, but does not address poverty issues, which can aggravate disaster damage.

Collective regional efforts can complement deficits at the national level—for example, Fiji’s current DRR plan does not take account of climate change but the island does receive protection in the form of the Strategy for Climate and Disaster Resilient Development in the Pacific (SRDP), a regional strategy drafted by the Pacific Island countries to provide an integrated approach to disaster and climate change risks (Pacific Island Forum Secretariat 2015), which is important for countries like Fiji due to the small economies and low national capacities involved.

4 Potentials for Synergy at Local Level

There is greater potential for linking DRR and CCA at the local level since communities and local governments often have limited capacity to address risks and are often the first responders in emergencies. Further, the importance of “local” has been highlighted across the three frameworks and at different levels. The SDG document mentions it 10 times in its 35 pages, in connection with authorities, communities, culture, materials and planning; goals 6, 8, 11 and 13 further mention local issues. The Paris Agreement quotes it nine times, in connection with communities and knowledge in the field of adaptation; and the 25-page SFDRR document quotes it 48 times, in connection with different entities such as government, community, knowledge, priority, DRR strategy.

This all points to an apparent increased focus, at least in the case of DRR, of the global mind-set on local implementation. All four priorities in SFDRR have explicit national and local contexts, but although the SDGs and Paris Agreement acknowledge the importance of local issues they lack the specifics for their implementation.

In the field of stakeholder engagement in implementing development activities, comparisons have often been made between governments

and NGOs regarding the efficacy of activities and approaches implemented. There is ample evidence to suggest NGOs are better able to implement innovative small-scale pilot initiatives, while governments are better placed to invest in and sustain large interventions at sub-national and national levels. However, the picture is mixed as regards the sustainability of these initiatives—while NGOs are better placed to perfect the implementation of or fine-tune programmes to achieve objectives, these programmes are often unsustainable in the long-term when compared to government initiatives, which last longer but often fail to deliver the intended benefits. Collaboration between governments and NGOs in SD in general and risk reduction in particular has long been called for but has seen limited success. Governments are becoming increasingly aware of the need to collaborate with NGOs and evidence of local-level committees to bring together these two stakeholders is emerging (Behera 2002). This issue is addressed below in section 5 – The Way Forward.

It has also been observed that DRR has been slowly mainstreamed into various developmental programmes being implemented by governments and such integration has been found effective especially in achieving multiple benefits of SD (box 2).

Box 2 Integrating DRR into Developmental Programmes in India

Integrating DRR into developmental programmes at local and national levels has long been sought in India, and much progress has been made. The government has incorporated DRR elements into the National Urban Housing and Habitat Policy and National Housing and Rural Habitat Policy. While such programmatic integration has increased in several other countries too, more traditional approaches also abound, in which local development programmes have reduced risk considerably—for example, the Mahatma Gandhi National Rural Employment Guarantee Scheme (2005), which helped create tangible community assets over the past several decades nationwide and covers drought-proofing, flood mitigation and micro-irrigation. This scheme has also focused on other important SDG areas, including sanitation, health, transportation and food (Ministry of Rural Development 2016).

5 The Way Forward

As explained above, while some progress has been made in areas of SD, DRR and CCA, since actions are initiated at the local level and the challenges exist at the local level, it is important to recognise, prioritise and institutionalise efforts maximising the synergies between these initiatives on the ground.

Recognise needs and implement integrated approaches that complement SD, DRR and CCA

The recommendations offered here to strengthen the synergy between SD, DRR, and CCA apply at the

regional, national, and sub-national levels, and can be divided into four main categories: programmatic integration, collaboration, capacity and innovation, as schematically depicted in figure 7. Feedback loops span between levels, forming the basis for the need to recognise and implement integrated interventions that complement SD, DRR and CCA. While this recognition can occur across all scales, it could start at the regional level and complement national and sub-national initiatives.

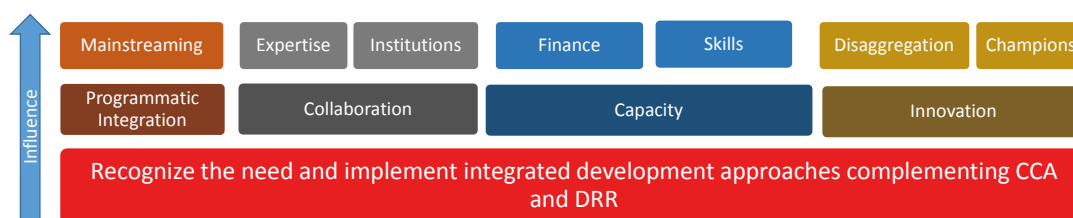


Figure 7 Maximising Synergy via Programmatic Integration, Collaboration, Capacity, and Innovation

It is important for international and regional forums (G-7, G-20, G-77, BRICS, ASEAN, SAARC) to recognise, advocate and implement a development agenda that is climate-sensitive and disaster resilient. This issue also needs to be strongly recognised in global/regional strategy development, and can be achieved by bolstered adaptation planning and implementation via linking DRR and CCA, and loss and damage can provide ample opportunity for this. For some regional entities (e.g., ASEAN), which have agreements on single issues, similar agreements for other frameworks need to be developed.

5.1 Programmatic Integration

1. *Integrate risk reduction into development plans, policies, city/local services, which are linked to developmental priorities:* Disaster and climate risk reduction must be integrated into existing city/local authority services such as water, sanitation, education, health and land use planning. Sustainable development needs risk issues to be linked to city services and also satisfy the “additionality” qualification, which can increase service resilience.

2. *Mainstreaming impact assessments:* As has been done for environmental impact assessments, it is high time to mainstream SD, DRR and CCA impact assessments at programmatic and project levels. While there are targets for SDGs, nationally-agreed DRR and CCA targets in consonance with SDGs are essential to realise these three outcomes. Such mainstreaming will bolster the climate- and disaster-resilience of policies and investments, via proper checks in terms of disaster and future climate risks.
3. *Establish appropriate national Focal Points to measure progress in the three frameworks/agreements:* Responsibilities need delegating to ensure greater synergy between interventions, and this can be done by identifying appropriate national Focal Points to measure progress in the three frameworks. In actual practise, implementation needs to be carried out by different ministries but the data and statistics related to progress must be centralised (at the Focal Point), either with the national planning agency or national statistical bureau/census department. Similar integration should also happen at state and sub-national

levels, including at programmatic and project levels.

5.2 Collaboration

1. *Stronger collaboration between DRR and CCA communities:* To strengthen the weak DRR elements in the Paris Agreement, close collaboration is needed between the DRR and CCA communities at the national and sub-national levels, and loss and damage will provide the opportunity for this (box 1).
2. *Enhancing private/business sector involvement and participation:* The private sector can act as the key development agent in most cases, and is emphasised in SDG as its mode of implementation, and in SFDRR's actions, which involve the private and business sectors in risk reduction. Private companies can play a key role in climate risk reduction, and policies need developing at the local level in order to promote their involvement in all three sectors.

5.3 Capacity

1. *Technical capacity:* Local stakeholders are often limited in scientific capacity and especially limited in technical expertise, which both need bolstering to enable effective local implementation. Linking local resource institutions (academic and research institutions) to local authorities will help, but raising the capacity of local decision-makers themselves for smoother collaboration and communication with these institutions is more effective. Adding appropriate stipulations to related plans, policies and guidelines used by local stakeholders will strengthen these linkages.
2. *Financial capacity:* Lack of financial capacity is one of the chief limitations facing local governments,

whose budgets are only approved from above. Appropriate fiscal decentralisation at the top tiers of government and recognition of the need to expand the mandate and responsibilities of local governments will resolve this issue.

5.4 Innovation

1. *Focus on innovation, knowledge and business:* Innovation needs to be promoted in science and technology, knowledge development and business, which can be addressed by national governments and international agencies via respective interventions.
2. *Utilise new tools for information sharing:* The global era of communications we are in opens up new doors for social networking and open data-sharing among countries and stakeholders, thus we need to use new and emerging communication technologies more effectively to bridge the development divide between countries, bring stakeholders together in a common understanding and promote synergistic actions on the ground.
3. *Customised education:* At the elementary, higher and university education levels, knowledge on linkages between SD, DRR and CCA needs to be integrated into modules and syllabuses, which can be customised based on local needs and will enhance human resource development in the longer term.
4. *Identify and recognise local champions and innovators:* it is equally important to recognise and support, by building their capacities, local champions and innovators, both in terms of institutions and people; document and analyse their good practices, and disseminate them widely, which networks can do effectively.

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• Cover Photo

Maximum usage of productivity: A semi-floating vegetable garden in the rice field in Southern part of Bangladesh. The livelihood support project was supported by NGO, named CONCERN.

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