

# Emerging Economies, Disaster Risk Reduction, and South–South Cooperation: The Case of Mexico

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Published PDF deposited in Coventry University's Repository

**Original citation:**

Renwick, N 2018, 'Emerging Economies, Disaster Risk Reduction, and South–South Cooperation: The Case of Mexico' *IDS Bulletin*, vol 49, no. 3, pp. 73-92.

<https://dx.doi.org/10.19088/1968-2018.149>

DOI [10.19088/1968-2018.149](https://dx.doi.org/10.19088/1968-2018.149)

Publisher: Institute of development studies

© 2018 The Author. *IDS Bulletin* © Institute of Development Studies | DOI: [10.19088/1968-2018.149](https://dx.doi.org/10.19088/1968-2018.149)

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# IDS Bulletin

Transforming Development Knowledge

Volume 49 | Number 3 | July 2018

## EMERGING ECONOMIES AND THE CHANGING DYNAMICS OF DEVELOPMENT COOPERATION

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**Naohiro Kitano**



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# Emerging Economies, Disaster Risk Reduction, and South–South Cooperation: The Case of Mexico

Neil Renwick<sup>1</sup>

**Abstract** The emerging economies differ from each other in various economic, political, and cultural ways, but hold a broad understanding and approach on key challenges of sustainable development, climate change mitigation, and disaster risk reduction (DRR). This approach contributes to advancing South–South cooperation (SSC). This article focuses on the approach of these economies to DRR, using the case of Mexico to examine this question. Mexico, one of the world’s most vulnerable countries to natural disasters, has been applauded by leading international DRR figures for its commitment and practical response to DRR. The article explores this DRR response and what Mexico’s story has to offer to other countries in the context of SSC and its emerging role in international development cooperation (IDC). It argues that Mexico’s DRR story has many important positive aspects to contribute to SSC knowledge-sharing and IDC, but it also illustrates continuing challenges of financing, administration, and politics for emerging and developing economies alike.

**Keywords:** emerging economies, disaster risk reduction, Mexico, South–South cooperation, international development cooperation, human security.

## 1 Introduction

It is the fortieth anniversary of the Buenos Aires Plan of Action for Promoting and Implementing Technical Cooperation among Developing Countries (BAPA) in 2018. The decades since the inception of BAPA have seen South–South cooperation (SSC) play an increasingly important role in the global cooperation architecture. The 2nd High-Level United Nations Conference on South–South Cooperation (HLCSSC) takes place in Argentina in March 2019. SSC is ‘the process by which two or more developing countries initiate and pursue development through the cooperative exchange of multidimensional knowledge, resources, skills and technical know-how through different types of cooperation’ (Delica-Willison 2011: 4). Disaster risk reduction

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The *IDS Bulletin* is published by Institute of Development Studies, Library Road, Brighton BN1 9RE, UK  
This article is part of *IDS Bulletin* Vol. 49 No. 3 July 2018: ‘Emerging Economies and the Changing Dynamics of Development Cooperation’; the Introduction is also recommended reading.

(DRR) is central to making SSC work coherently and effectively, climate change adaptation, and sustainable development. This has been long recognised internationally, with the World Bank's Global Facility for Disaster Reduction and Recovery (GFDRR) explaining the critical relationship between SSC and DRR as far back as 2008:

South–South Cooperation is inspired by a spirit of mutual solidarity as well as a shared and enlightened self-interest in providing real benefits for the most vulnerable people. South–South Cooperation also fosters developing country leadership and ownership of the disaster risk reduction agenda (GFDRR 2008: 1).

As the 2017 *World Risk Report* argues, 'disasters prevent developmental progress, and a lack of developmental progress increases disaster risk. In order to break this vicious circle, strategies for disaster risk reduction must in future be an integral component of comprehensive strategies for sustainable development' (Bündnis Entwicklung Hilft 2017: 15). DRR is a vital response to the risk of natural disasters. DRR is

aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development... DRR is the policy objective of disaster risk management, and its goals and objectives are defined in disaster risk reduction strategies and plans (UN 2016: 1).

This article explores the contribution of emerging economies to DRR. It does so with specific reference to Mexico, a so-called MINT (Mexico, Indonesia, Nigeria, Turkey) emerging economy and widely regarded as an exemplar of DRR practice and commitment. In the view of the United Nations Office for Disaster Risk Reduction (UNISDR), 'Mexico has a solid track record in managing and anticipating disaster risks and has a lot of expertise to share with other countries' (Leoni 2016: 1). Specifically, the article addresses the questions: 'How do emerging economies approach DRR and have they distinctive stories to share that can contribute to the further development of South–South cooperation as a practical multi-stakeholder approach to sustainable development?' As Jim O'Neill has argued:

The BRIC countries... are already closely watched. The group I'm studying for this project [a 2013 BBC Radio 4 special report] – let's call them the MINT economies – deserve no less attention. Mexico, Indonesia, Nigeria and Turkey all have very favourable demographics for at least the next 20 years, and their economic prospects are interesting (O'Neill 2013).

This selection illustrates one of the central aims of the present article, namely, to highlight and showcase the wider range of emerging economies. Mexico is chosen for five reasons: (1) its high risk of natural disasters; (2) the country's national protection system, described by Robert Glasser, the then special representative of the UN Secretary-General for Disaster

Risk Reduction and the then head of UNISDR, as ‘a shining example of how to manage the threats posed by hazards’ (UNISDR 2017b: 1), a multi-stakeholder system bringing together government, the private sector, civil society organisations, and international organisations; (3) the engagement of Mexico with global and Latin American policy fora and action programmes, exemplified in its hosting of the 2017 Global Platform for Disaster Risk Reduction; (4) Mexico’s dual role as both recipient and provider of international development cooperation assistance; and (5) the continuing, substantial challenges of DRR facing Mexico despite its substantial investment, political commitment, and operational progress. As such, this article argues Mexico’s story of DRR contributes a practical experience to the evolving understanding, narrative and future orientation of SSC as the HLCSS takes stock and prepares to take SSC to the next stage of its development and to the global SSC epistemic community.

Strengthening DRR is a key component of the interlocking, mutually reinforcing global ‘universal’ compacts on climate change and sustainable development. Clearly, this is a two-way process; progress at the global level requiring advances made at regional, national, and societal levels and a critical flow of knowledge resources between the emerging economies and supra-state structures, processes, and agencies. This article argues that the role and impact of emerging economies, many of which are the most exposed to natural disasters, are central to the realisation of the aims and objectives of these global pacts. The emerging economies have brought with them distinctive approaches to development grounded in their own historic experiences. These economies offer different principles of partnership, equity and mutuality, and sovereign non-interference in their relations with other developing economies as well as focusing their commitment to South–South cooperation and to South–North–South triangular cooperation on technical assistance and infrastructure capacity building (Stuenkel 2013; Gu, Shankland and Chenoy 2016). A key point, however, is that, while the ‘emerging economies’ share a number of common characteristics, interests, and aims, there is a danger in overstating these shared features and understating important elements of heterogeneity. Beyond the homogenising acronymic branding lies a landscape of rich diversity in the way these economies understand and promote development domestically and internationally and in their approach to DRR. In the present article, the relationship between consolidating elements and those of diversity is in creative rather than destructive tension. Given the welter of recent commentary on the emerging economies, it is easy to forget that they are a recent addition to the pantheon of systemic agencies and are on a steep learning curve to define their own response to their ‘rise’, relations with each other, and relations with the established Organisation for Economic Co-operation and Development-Development Assistance Committee (OECD-DAC) system.

## **2 Brief review of the literature**

There is a vast, growing, and wide-ranging literature directly and indirectly associated with DRR. The body of academic, governmental and intergovernmental, civil societal, and press literature encompasses

a broad range of DRR topics, issues, and challenges, many of which intersect with the literature on climate change and sustainable development, generating a range of emerging issues (Sudmeier-Rieux *et al.* 2017). The range of topics include: the relationship between human security and DRR (HSN 2017; FAO and UNTFHS 2016; Renwick 2016; Kitaoka 2015; Futamura, Hobson and Turner 2012; Hobson, Bacon and Cameron 2014; JICA 2010); the terminology of DRR as a key implementation instrument for Sendai Framework benchmarking indices (UN 2016); provisions, implementation, and monitoring of the Sendai Framework on DRR (UNISDR 2015a, 2015b), for example with respect to: health (Aitsi-Selmi and Murray 2015); gender (UNISDR 2018; Lovell 2014; Enarson and Dhar Chakrabarti 2010); food security (FAO and UNISDR 2017; WFP 2012; de Haen and Hemrich 2007); infrastructure investment (GPDRR 2017); financing (UNISDR 2017c; VOICE 2013); DRR synchronisation with climate change and sustainable development structures, processes, and agencies of action (JICA 2018a, 2017; UNISDR 2015b; Mitchell 2012); displaced persons (iDMC 2017); managing DRR at the global, regional, national, and sub-national levels and local governance (Yao 2016; Al-Nammari and Alzaghlab 2015); 'smart' agriculture (FAO 2015); the impact and potential of emerging technologies (AIDF 2016); private–public partnership, the contribution of business and best practices, for example, through the work of ARISE, the Private Sector Alliance for Disaster Resilient Societies (ARISE 2017; UNISDR 2013, 2014, 2017a); South–South knowledge transfers (Aboubacar 2014); DRR and conflict zones (International Alert 2015; ODI 2013; Ferris 2010); the need for greater citizen DRR awareness and participation and civil societal engagement (Ruiz-Rivera and Melgarejo-Rodríguez 2017); and the role of cities and urban centres, a good example being the initiative to develop resilient mountain cities (UNISDR 2015c).

Key findings in this literature are a need to ensure effective governance at the global, regional, and national levels and recognition of the importance of the emerging economies and SSC. DRR is framed by the distinctive approach to sustainable development and its intersection with climate change brought by the growing economic and political importance of emerging economies. The emerging economies promote a broadly common approach to 'inclusive' and 'innovative' sustainable development and global economic growth grounded in principles of equity, mutuality, reciprocity, and partnership and backed by new structures and agencies (such as the Asian Infrastructure Investment Bank reifying these principles into practical project support). This approach both reflects and contributes to processes of SSC and technical cooperation (Gu 2015, 2017). The literature indicates a deeper aspect related to the emerging and developing economies and their call for the reform of the funding and managerial principles and practices of the World Bank and International Monetary Fund (IMF) to better reflect the shifting importance of the emerging and developing economies.

Despite the juggernaut of writing projecting common purpose and implementation progress, the literature also contains writings that run counter to the prevailing wisdom that the holistic approach weaving together the troika of DRR, climate change mitigation, and sustainable development is translating into a changed approach on the ground. A survey by Peters identified a range of challenges:

- ‘the confines of institutional mandates’,
- ‘the lack of an evidence base to guide policy and programming’,
- ‘fear of the unknown’,
- ‘lack of funding for experimentation and trialing new or unproven approaches’,
- ‘practical concerns around accessibility and operational security’,
- ‘a tendency to prioritise peace and security over DRR’ in fragile and conflict-affected contexts (2017: 10).

Illustrative of this literature are commentaries expressing concern about financing for DRR and particularly disaster recovery preparedness. For example, Francis Ghesquiere, Head of the GFDRR, and Jo Scheuer, Director for Climate Change and Disaster Risk Reduction in the United Nations Development Programme’s (UNDP) Bureau for Policy and Programme Support, have argued that ‘With limited time and resources, however, adequate preparedness for these common events is often neglected in developing countries. The result is a pattern of deficient recovery that is imperiling sustainable development, and leaving millions of the most vulnerable behind’, and explained international efforts to address this challenge, including by the World Bank’s GFDRR–UNDP–European Union, Japan, and Luxembourg (Scheuer and Ghesquiere 2017).

The sixth of the seven Sendai Framework’s global targets is to ‘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’ (UN 2015: 1). The issue of DRR finance is also raised with respect to DRR in fragile and conflict-affected states, Peters and Budimir arguing that there is a ‘funding blind spot’ when it comes to these countries (2016: 1). An important 2013 analysis of 20 years of DRR financing exposed critical weaknesses. A GFDRR and Overseas Development Institute (ODI) study (Kellet and Caravani 2013) found that money spent on DRR constitutes a small share of aid funding. For every US\$9 that had been spent on disaster response, only US\$1 had been allocated to prevention and preparation and, for every US\$100 of development assistance, 40 cents was invested in protecting that aid from the impact of disasters. Moreover, funding originated from a few donors – the World Bank, Asian Development Bank, and Japan – and the main recipients were middle-income countries, particularly China, and Indonesia. Particularly concerning was the finding



that the funding had primarily been directed into protecting economic assets rather than people (Kellet and Caravani 2013: vi).

### 3 Natural disasters and human security

Natural disasters and the impact of climate change strike at the very heart of human security. Human security seeks to promote freedom from fear and want and freedom to live in dignity. The Commission on Human Security's definition of human security is 'to protect the vital core of all human lives in ways that enhance human freedoms and human fulfilment' (CHS 2003: 4). This impact of natural disasters and climate change is experienced disproportionately, with the poorest in society and women hardest hit; in other words, those most dependent on natural resources for their livelihoods. These sections of society are those with the least capacity and least pillars of resilience to respond to such events. In particular, it is women who often experience greater risks and consequential burdens in conditions of poverty and unequal access and participation in DRR, climate change, and sustainable development governance and responses, limiting and weakening the effectiveness of implementation strategies. The challenge of natural disasters and DRR also has an important intergenerational dimension (Caruso 2014), including short- and long-term consequences for mental and physical health and development, displacement, insecurities of income, food, shelter, sanitation, exploitation and abuse, and education. An important component of this experience is the disorienting impact on an individual's sense of time and space. This is most evident in post-traumatic stress disorder (PTSD). Trauma arising from natural disasters is especially potent because they traumatise large groups of people simultaneously, giving rise to feelings of individual and collective anxiety and guilt among survivors, in some cases giving rise to suicidal tendencies (Lau *et al.* 2010: 504). Such trauma is defined both by the experience of being in the event itself and by a person's or population's reactions to it (APA 2013; Babbal 2010).

The case for recognising a close link between human security and DRR is evident in the literature. According to the Human Security Network:

At its core, human security reinforces the notion that peace and security, human rights, and development are interlinked and mutually reinforcing. It is about protecting people from threats to their life, safety, fundamental rights and dignity... Strengthening all three pillars of human security can contribute to greater resilience to disaster risk, decrease the vulnerability of people in vulnerable situations, and speed up recovery processes. A human security approach has a strong potential to help mitigate the multidimensional consequences of disasters and strengthen the capacities of communities to manage these risks (HSN 2017: 1).

This argument has been made in more detail by the President of the Japan International Cooperation Agency (JICA), Shinichi Kitaoka, in his Keynote Speech at the Third UN World Conference on Disaster Risk Reduction in 2015. In this address, President Kitaoka made the

important point that the human security–DRR relationship is not, as many commentaries seem to imply, solely about how DRR can contribute to enhanced human security but is also about how a human security approach and understanding can contribute to more effective DRR: ‘I believe that by making the human security approach more explicit in our disaster risk reduction efforts, we will be able to better plan and prepare for disaster prevention without leaving the most vulnerable people behind’ (Kitaoka 2015: 1).

#### **4 Mexico, DRR and SSC**

##### **4.1 Mexico’s natural disaster profile**

As noted in the Introduction, Mexico’s DRR experience has been regarded as a good example to other countries of how to establish an effective DRR response. The Mexican government has recognised this and contributes its story to South–South knowledge-sharing and action programmes through regional and global fora, and networks. The point of departure is the nature of the multiple natural threats facing Mexico. Owing to the nature of its geographical location, topography and anthropomorphic history, Mexico has high exposure to a wide spectrum of hazards, raising the threshold of threat to human security. These hazards include earthquakes, volcanoes, tsunamis, hurricanes, wildfires, floods, landslides, and droughts. Mexico’s Disaster Risk Profile underlines this high-level exposure and risk, with over 30 per cent of Mexico affected every year by disasters (Leoni 2016; Pérez-Campos *et al.* 2008). Mexico ranks 94th on the 2017 World Risk Index. The Index calculates the risk posed to 171 countries worldwide by means of a multiplication of risk and vulnerability. The 2017 Report presents a five-year perspective for the period 2012–16 (Bündnis Entwicklung 2017: 40).

##### **4.2 Human security impact**

Climate change critically affects Mexican DRR and human security (Ruiz-Rivera and Lucatello 2017). This was recognised by the Mexican government itself in a 2009 submission to the UN Secretary-General addressing climate change and human security, which argued that ‘impacts, magnitude and projected persistence of environmental, social and economic phenomena derived from climate change turn this issue in[to] a priority matter that has direct repercussions in all abovementioned security spheres’ (UN 2009: 1). More recently, the current president, Peña Nieto, has recognised that ‘Climate change is creating new risks and we need to rethink the way we produce and consume, the way we are doing things, as the challenges ahead are big’ (UNISDR 2017b). Mexico is the 14th largest greenhouse gas emitter in the world, and the second largest in Latin America. Natural disasters impact upon over 30 per cent of Mexico every year, ranging from 7,000 seismic shocks to hurricanes, volcanic eruptions, floods, and forest fires. Mexico is experiencing significantly more severe droughts, floods, and storms including hurricanes. Simultaneously, rainfall is decreasing, exacerbating the development of arid zones, degrading agricultural land, lowering production, weakening incomes, and providing additional impetus for rural depopulation and increased urbanisation.

The impact on Mexican human security has been high. In the period 1970–2009, Mexican data estimates that around 60 million people were affected by natural disasters in the country (World Bank 2012). A decade ago, a study of the impact of Mexico's natural disasters at the municipal level demonstrated 'a significant impact from natural disasters on reducing the Human Development Index and also on increasing poverty levels' (Rodríguez-Oreggia, de la Fuente and de la Torre 2008: 17). Mexican insecurities arising from natural disasters are broad and complex. In addition to the intensity of human loss and suffering and detrimental impact upon children's psychology, Mexicans confront the loss of employment and income, dignity and status, with a disproportionately adverse impact upon women, indigenous peoples and the poorest at their most vulnerable in the *favelas* around Mexico City. Compounding this experience is the economic cost, loss of human capital, and destruction of communications, transport and essential public services infrastructure; agricultural degrading and industrial dislocation; and ecological devastation.

#### 4.3 Mexico's DRR approach

What is it that Mexico's DRR offers to SSC? The response of Mexico to DRR has been described as a 'shining light' and an 'icon of risk management' (UNISDR 2017b: 1). In the view of Robert Glasser, the then special representative of the UN Secretary-General for Disaster Risk Reduction, 'The way Mexico manages disaster risks shows the effectiveness of its civil protection system and its enormous capacity to mobilise and unite all Mexicans against disasters' (UNISDR 2017b: 1).

The Mexican National Civil Protection System (SINAPROC) was created in 1986. The galvanising factor was the 1985 earthquake that devastated the country, causing 10,000 deaths and thousands more casualties; the earthquake impacting most severely on Mexico City. SINAPROC was created as an inclusive and multi-level system integrating stakeholders from all over the country and from the three levels of government, the private and social sectors, academia, and scientific organisations. Its initial objective was to provide an institutional framework for the improved coordination of emergency response and worked with UNISDR and the World Bank to establish the new system (World Bank 2013a, 2013b).

Since inception, SINAPROC has seen an evolutionary progression of its risk assessment, early warning, preparedness, and disaster risk financing functions. The system's administrative structure has been strengthened and coordination made more effective. Emergency response plans have been more clearly elaborated and supported by training provision in strategic sectors, particularly at the federal level. In addition, the system has been technically upgraded with the deployment of a grass-roots early warning system, a system that would prove its worth in the capital during the September 2017 earthquake, with invaluable seconds of warning given to the population.

In terms of generalising from Mexico's experience, the country's story of DRR response and resilience-building provides a significant example, and potentially transferrable, model of effective DRR financing for SSC, albeit with important warning caveats. The context for this is the present government's setting of four national foreign policy priorities to include international development cooperation (IDC). The country's 2013–18 National Development Plan states that 'cooperación internacional para el desarrollo, como una expresión de solidaridad y, al mismo tiempo, un medio para impulsar al bienestar y la prosperidad' ['Foreign policy will be based on international development cooperation, as an expression of solidarity and, at the same time, a means to promote wellbeing and prosperity of our country and the international community'] (Government of Mexico 2013: 99). Mexico's IDC is coordinated by the Mexican Agency for International Development Cooperation (AMEXCID), basing its activities on the Law on International Development Cooperation (LIDC).

As noted above, a central issue in DRR has been finding the funding necessary to tackle the varied and complex implementation challenges, a challenge recognised in the Sendai Framework and in the Fifth Session of the Global Platform for Disaster Risk Reduction, held in Cancún, Mexico, in May 2017. For some governments, such as Bolivia, the root of this problem is the historical legacy of environmental and economic debasement left to the developing countries of the global South by the excessive emissions of advanced economies of the North. In this perspective, climate change mitigation and DRR are issues of global justice and the controversial arguments advocating a 'climate debt':

Developed countries are thus responsible for compensating developing countries for their contribution to the adverse effects of climate change... Failure to honour payment of financing and compensation constitutes an 'adaptation debt' owed by developed countries to developing countries. Excessive use of atmospheric space: An emissions debt. As well as causing adaptation harm, developed countries' historical and current excessive emissions are limiting atmospheric space available to developing countries (GoB 2009).

According to one estimate, Mexico's share of global 'climate debt' was 0.72 per cent in 2010 and remained unchanged in 2015 but declined to 0.67 per cent in October 2017, and the country was ranked 23rd out of 199 countries (163 full reporting; 36 estimated; USA declining share 33.6 per cent, China increasing share 17.59 per cent, Japan stabilised share 4.80 per cent). Mexico's climate debt per capita, accumulated since 2000, has increased from US\$105 in 2010, to US\$291 in 2015 and totalled US\$377 in October 2017 ranking it 62nd in the global list (Andersen 2017).

Mexico's response to DRR financing has attracted international attention and centres on FONDEN, its Fund for Natural Disasters, to support disaster relief and reconstruction. A World Bank review of FONDEN

in 2012 concluded that 'FONDEN now provides one of the most sophisticated disaster financing vehicles in the world' (World Bank 2012: vi). FONDEN became operational in 1999. Funds from FONDEN could be used for the rehabilitation and reconstruction of: public infrastructure at the three levels of government (federal, state and municipal); low-income housing; and certain components of the natural environment (e.g. forestry, protected natural areas, rivers and lagoons). The financing system operates through two main programmes: for reconstruction and for prevention. Both programmes operate under the financial responsibility of BANOBRAS, Mexico's state-owned development bank. Since its inception, the government has steadily moved the focus and funding for FONDEN to emphasise prevention rather than post-disaster risk management.

However, despite the political plaudits, this funding story also illustrates the fundamental challenges faced by many emerging and developing countries in maintaining their commitments. The shift to prevention has not yet been fully implemented. The OECD undertook a review of the Mexican National Civil Protection System in 2012, noting the strengths of the system, a number of weaknesses, and areas for strengthening the system (OECD 2013). Yet, early signs of concern with the system emerged in 2014, as Mexico's federal auditor heavily criticised the government for spending less on disaster preparation and prevention than on reconstruction. This concern has continued to escalate as budgetary cuts have eaten into DRR funding and impacted adversely on the system. In 2017, Enrique Guevara, a former head of Mexico's National Centre for Disaster Prevention (CENAPRED) argued that 'We should be investing more in prevention. Firstly because you save lives, and secondly you save money' (Stargardter 2017: 1).

This takes us to the heart of the issue of DRR implementation for emerging economies such as that of Mexico. Some years ago the 1992 American presidential economy was defined by the slogan 'It's the economy stupid!'. So too today, as Mexico's economic circumstances, political priorities, and tensions of governance are potentially derailing substantive advances made since the devastating 1985 earthquake. Mexico's economy is heavily dependent on oil revenues, financing about 20 per cent of Mexico's federal budget. A decline in oil prices has cut income, created budgetary shortfalls, and necessitated budgetary cuts. Consequently, disaster budgets have been halved in recent years. In 2017 alone, budgets for disaster and civil protection efforts were reduced by 25 per cent, from about 8.6 billion pesos (US\$475 million) in 2016 to 6.4 billion pesos. The budget for FOPREDEN, the fund for the prevention of natural disasters, was reduced by 50 per cent. FONDEN, the fund for disaster relief, lost 25 per cent of its budget. At CENAPRED, expenditure fell by 20 per cent between 2012 and 2016, and a senior official claimed that this damaged the upkeep of a national risk atlas and lowered morale at the institution. In the light of these cutbacks the Mexican Congress issued a highly critical report concluding that 'the state is relinquishing its responsibilities to its population, given inevitable and unknowable disaster risks' (Stargardter 2017).

The economic condition also led to criticism that the government had failed to provide the necessary funding to ensure early warning systems were as robust as technically possible, specifically the earthquake early warning system giving Mexico City's inhabitants sufficient time to evacuate buildings before tremors arrive. The system needs more monitors to detect even more tremors. For the 7.1-magnitude earthquake in September 2017 (USGS 2017), as noted above, although the system provided some warning, the system's director stated that better detection could have given Mexico City's residents up to five seconds more warning that day, with many locals stating that they heard the alarm only once the ground began shaking. The government, and specifically the president, stands accused of having rejected funding requests to upgrade the system. In addition, even with regard to disaster reduction, concern has been raised over the effectiveness of the decentralisation mitigation works. Given Mexico's high risk, provincial and municipal projects have been limited in number, due to lower prioritisation and particularly as a result of a critical technical and administrative undercapacity to identify risk and propose concrete measures. This is especially the case in those sub-regions of the country facing the highest level of risk (Saldana-Zorrilla 2015). While President Nieto has acknowledged the need for more funding and has called for this to be provided by Congress, the concerns over the system run contrary to the picture provided by Luis Felipe Puente, head of SINAPROC, who has argued that

It has taken us some time to build it but it works, is efficient and involves all Mexicans. Today, Civil Protection works at the Federal, State and Municipal levels and is supported by strong legal instruments and good monitoring systems. It is a vital system to help us face not only natural emergencies but any threat that can put our country in danger (Leoni 2016: 1).

In terms of South-South cooperation and the sharing of Mexico's experience, while the internal strategic development was being implemented, Mexico developed important mechanisms for multilateral cooperation, for example with respect to tropical storm forecasting. The government was an active participant in the Hyogo Framework for Action 2005-15 for the formulation of strategies and policies for disaster risk management. This laid the foundation for the country's regional multilateral cooperation during this period through the Regional Platform for Disaster Risk Reduction in The Americas organised by UNISDR (the Sixth Regional Platform to be held in Cartagena, Bolívar, Colombia in June 2018) and, post-2015, through the Regional Action Plan for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 in the Americas. As is the case with many other emerging economies, they are simultaneously new providers and recipients of international development assistance (Renwick 2016).

As a middle-income country recipient, 'it is a recipient of technical, academic and financial cooperation (mostly non-concessional) from

other countries and multi-lateral organisations'<sup>2</sup> (González 2017: 3). As a provider it contributes to 'South–South Cooperation (CSS) in bilateral, regional, triangular schemes (in association with another provider to reach a third country)' (*ibid.*: 3). Mexico provides funding resources in extra-budgetary funds or public trusts for international cooperation purposes with three primary SSC objectives: (1) to offer financial support and strengthen cooperation programmes and projects; (2) to contribute to international development through technical cooperation, exchange of experiences (experts) and knowledge; and (3) to improve the effectiveness of public policies (capacity building). This IDC commitment is based on the National Fund for International Cooperation for Development (FONCID) and Sectoral Research Fund SRE–CONACYT and a range of joint funds: Mixed Fund for Technical and Scientific Cooperation Mexico–Spain, Joint Cooperation Fund Mexico–Chile, Joint Fund of Cooperation Mexico–Uruguay and Joint Cooperation Fund Mexico–Germany; and on multilateral funds with international organisations: Mexican Fund for International Cooperation for Development with Ibero-America (FOMEXCIDI-SEGIB), Mexican Fund for Cooperation with Latin America and the Caribbean (through the Organization of American States (OAS)), and Mexico Fund for the OAS. Together, these funds helped underwrite 101 cooperation projects. In 2015, 74 per cent of Mexico's IDC was its contribution to international organisations, 11.4 per cent for scholarships for international students, 7 per cent for financial cooperation, 3.9 per cent for technical cooperation and 0.2 per cent for humanitarian assistance (González 2017: 5–6).

Triangular cooperation forms an important component of Mexico's SSC. With respect to Japan, for example, an important DRR project has been the El Salvador–Mexico–Japan TAISHIN (Earthquake-Resistant Popular Housing) project. This ran in two stages: December 2003–November 2008 and May 2009–April 2012. Nonetheless, bilateral cooperation remains a central pillar of Mexico's IDC. For example, in 2017, the Japan–Mexico Joint Programme (JMPP) prioritised 'Assistance in Cooperation Policy for International Development' and the goal of triangular cooperation (JICA n.d.).

Project work included knowledge and skills transfers in adolescent sexual and reproductive health. Cooperation also included a major programme to promote Scientific-Technical Cooperation and for the Strengthening of Capacities to face Climate Change. This programme includes assessment of the Diversity and Development of the Sustainable Use of Genetic Resources of Mexico, Development of the Aquaponics System Combined with Open Cultivation Adapted to the Arid Zones for the Sustainable Production of Food.

This Mexico–Japan bilateral cooperation in 2018 includes an important DRR project: Assessment of the Risk of Large Earthquakes and Tsunami in the Mexican Pacific Coast for Disaster Mitigation. This US\$4 million project (2016–21) focuses on the occurrence of large

earthquakes and tsunamis on the Mexican Pacific coast, with emphasis on the state of Guerrero, a region 140km in length very likely to experience a major earthquake in the near future. The project is intended to better inform the civil protection authorities of the state and to develop an educational programme with an emphasis on disaster prevention for the construction of more resilient communities (JICA 2018b).

## 5 Conclusions

This article has addressed the central questions of ‘How do emerging economies approach DRR and have they distinctive stories to share that can contribute to the further development of South–South cooperation as a practical multi-stakeholder approach to sustainable development?’ It has explained the global DRR challenge and, having established a human security–DRR analytical approach, explored emerging economies and their contributory potential for DRR in the context of the evolving process of SSC. The article argued that the emerging economies are important drivers of DRR and the wider processes of SSC. The study’s key findings are:

- The emerging economies offer an important new contribution of knowledge and practical experience to South–South cooperation, both in general terms and in relation to DRR.
- These economies, as a collective grouping, are highly diverse but demonstrate common principles, perspectives, and approaches to sustainable development, climate change adaptation, and disaster risk reduction.
- Their experiences as simultaneously recipients and providers of international development assistance, humanitarian aid and disaster relief support offers a very distinctive way of evolving their South–South, triangular, and technical cooperation.
- There is, however, a danger in over-homogenisation of this experience; BRICS members have their own particular ways of approaching the global agenda, as do MINT economies.
- Nonetheless, the global frameworks, action plans, regional platforms, and national strategies in DRR demonstrate an overall coherence of purpose and coordination of practice.
- Mexico’s practical experience illustrates what can be achieved positively in national, regional, and global DRR cooperation, offering a story of multi-stakeholder engagement for other economies facing natural disaster threats.
- Although the positives of Mexico’s DRR story are clearly important, perhaps even more telling are the continuing financial, administrative, and political challenges that remain in building resilience, protecting people, and strengthening human security from the threat of natural disasters.



### Notes

- 1 Coventry University.
- 2 Quoted text in this paragraph has been translated from Spanish using Google Translate.

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