Conference report

Towards a more resilient Caribbean after the 2017 hurricanes

Report from roundtable discussions, 30 January 2018

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Pannelists discuss building back better at public event. From left-right Ronald Jackson (screen), John Twigg, James Cameron, Patricia Scotland and Francine Baron. ©2018 David Watson/ODI

Introduction

Hurricanes Irma and Maria in September 2017 caused widespread destruction across the Caribbean and an estimated $130 billion in losses (Munich Re, 2018). The countries and communities most affected will take years to recover. This comes on top of multiple structural problems that constrain development in the region, including high levels of debt, economic fragility, insularity, remoteness (in some cases) and environmental fragility, as well as patterns of land use that have over time created high levels of hazard exposure.

Hurricanes are nothing new in the Caribbean: every year they cause, on average, $835 million in losses. The changing climate means we are likely to see more Category 4 and 5 hurricanes in the future (Knutson et al., 2015). Action for long-term resilience is needed now to avoid further human suffering, environmental degradation and the reversal of hard-fought development gains. 'Building back better' must be more than just a slogan. It requires a comprehensive plan and set of actions and skills that can address short-term imperatives, as well as long-term resilience needs (Wilkinson et al., 2018). The concept is not new, but it has not been rigorously applied or, as Executive Director of the Caribbean Disaster Emergency Management Agency (CDEMA) Ronald Jackson put it: 'These are not new lessons, we just haven't addressed them in a programmatic way before'.

Rationale

Disasters are a common feature of the Caribbean, and understanding the historical and cultural factors that lead to disaster is critical to identifying solutions. There is no 'quick fix' for building resilience, but disasters do create social pressure for change and an opportunity to learn lessons and modify policies and investments to consider future threats. This must mean much more than restoring damaged buildings. A broad set of policies and investments are needed, with strong coordination across housing and infrastructure, economic development, the environment and other sectors.

There are considerable challenges in promoting a more resilient Caribbean, including weak enforcement of building codes, economic activities that undermine fragile coastal ecosystems, the highly specialised and vulnerable nature of these island economies and fiscal and governance challenges, all of which will need to be addressed. This will require a comprehensive disaster impact assessment (to understand what was most affected and why); legal and regulatory reforms; a recovery strategy closely linked to existing development and investment plans; and more participatory forms of planning. It will also require more systematic use of hazard information and climate science in planning decisions, to manage future risks (Wilkinson et al., 2018).

Objectives

On 30 January 2018, ODI convened Caribbean decision-makers based in the UK, NGOs, donors and some of the world's leading experts on recovery and reconstruction to discuss the policies and investments needed at the national, regional and international level to avoid future losses. The roundtable discussions aimed to deepen understanding of how concepts of 'building back better' and 'resilient recovery' can be implemented by matching the challenges and priorities of Caribbean governments and community representatives with innovative solutions and recommendations based on the latest science, technical expertise and policy lessons. The event had four key objectives:

- Convene UK-based stakeholders.
- Initiate discussion and knowledge-sharing to turn concepts into reality.
- Build a multi-stakeholder network.
- Gauge interest in a follow-up event in the Caribbean.

The closed roundtable discussions were followed by a public event with two keynote speakers, the Secretary-General of the Commonwealth, Baroness Patricia Scotland, and the Dominica Minister for Foreign Affairs and CARICOM, Francine Baron, and a panel discussion with Ronald Jackson (CDEMA) and John Twigg (ODI). This report documents the key discussion points and recommendations produced during the roundtable discussions and public event, held just four months after Hurricanes Maria and Irma hit the Caribbean.

Roundtable discussions

Discussion point 1

What policies and investments are needed to promote diversified and resilient small-island economies?

There are significant structural reasons why Caribbean countries are so vulnerable to climate extremes and other natural hazards. Reliance on fossil fuel imports and high levels of debt are major impediments to resilient and sustainable development. High debt means these economies lack the fiscal space to invest and grow the economy and to manage risk and respond to disasters. Limited technical capacity to develop proposals means that these islands also have difficulty accessing climate finance to make capital investments that can enhance resilience. These features are common to many Small Island Developing States (SIDS), but Caribbean islands face some additional challenges. Due to their geographic location and topography, many experience frequent small-scale hazards such as landslides and floods, limiting the resources and capacity to prepare for larger events (Wilkinson et al., 2016). The heavy reliance of some countries on the financial services industry and cruise ship tourism provides limited benefits for the local economy,

with minimal contributions to the local tax base, skills development or employment opportunities. The fact that most are middle-income (and even high-income) countries means that, despite high levels of inequality and vulnerability to disasters, they are not eligible for official development assistance (ODA) at the very moment they most need it.

The costs of recovery will be significant – estimated at 226% of gross domestic product (GDP) in Dominica (IRIN, 2017). With limited options to borrow or attract grants, an investment-driven recovery model will be needed, combined with a restructuring of loan repayments and other options for reducing and/or swapping loans. These will need to be negotiated.

The discussion highlighted the importance of long-term economic development in recovery planning. As Minister Baron explained:

> *The climate resilient goal will require significant investment. This is not just about infrastructure but also agriculture; not just about roads but also how you make your economy more resilient.*

The 'Blue Economy' concept[1] has clear untapped potential for developing a new economic development model in the region. Caribbean islands have an important role to play in understanding and better managing oceanic sustainability through activities with a global economic value, such as sustainable fisheries (Patil et al., 2016; World Bank, 2017), but realising a sustainable 'Blue Economy' for the region will require outside support.

Fiscal constraints can be at least partially addressed by reducing reliance on imports. There are examples of Caribbean countries reducing reliance on fossil fuel imports, such as Barbados offering tax benefits for the production and installation of solar water heaters (Bugler, 2012). These could be replicated. If these and other government policies to promote greater island resilience are well publicised and explained to the public and investors, they could produce other 'resilience dividends' (Tanner et al., 2015), such as reducing interest rates on loans and insurance premiums.

Discussion point 2

How can nations restore and protect ecosystems through innovations in planning and insurance?

The recent hurricanes have caused extensive environmental damage and will continue to affect tourism, fisheries and agriculture for some time. In the longer-term, coastal and marine environments in the Caribbean are threatened by both human activities and climate change, with major repercussions for small-island economies highly dependent on these ecosystems, and for the resilience of communities and infrastructure located on the coast. Mangroves and coral reefs provide natural protection against hazards, but this 'green infrastructure' is poorly maintained and less attention is paid to its restoration after a disaster than so-called 'grey infrastructure' (which includes roads, railways, bridges and ports). In these islands, building resilience and sustainability go hand in hand; as such, incentivising environmentally sustainable behaviour in tourism, fisheries, aquaculture and shipping is key to long-term recovery and resilience.

The roundtable discussions highlighted the importance of working effectively across islands to restore and protect coastal, marine and inland ecosystems. Satellite environmental monitoring is costly if data is collected and used on an island-by-island basis, and there are obvious benefits in islands with similar geographical and topographical characteristics sharing data, knowledge and experience with environmental management and recovery planning. A priority for these islands is therefore capacity-building to enhance the use of available data, and some form of clearing-house or platform for sharing information and tools for resilient environmental management across islands (the Organisation of Eastern Caribbean States (OECS) has played an important role in this regard).

Participants highlighted several promising innovations that could help encourage the protection of coastal ecosystems, including innovations in insurance. Insurance coverage in the Caribbean is currently low, with the exception of property insurance for hotel chains and wealthier households, but new products covering natural resources could be attractive to hotel owners keen to restore beaches after a disaster and ensure that the coastal resources that benefit their businesses are properly maintained.

The Blue Economy concept was again mentioned, this time because of the importance of the ocean to food security, sustainable growth and potentially the energy security of these islands: small-scale initiatives are under way in a number of islands to investigate the potential to use aquaculture and harvesting of rafts of algae for energy generation, and the use of Sargassum seaweed as a biofuel (Morrison and Gray, 2017).

Understanding how ecosystems are affected by disasters and the assets that most need protecting to enhance resilience and sustainability is a societal issue, and one of increasing interest to island communities. Policy-makers will need to be clear about the co-benefits of ecosystem restoration (including the economic opportunities and environmental benefits, as well as reductions in disaster impacts) to continue attracting interest from donors and investors over the long-term recovery process.

1. The Blue Economy concept emerged out of the Rio+20 processes: https://sustainabledevelopment.un.org/content/documents/2978BEconcept.pdf

Discussion point 3

What legal and regulatory innovations and building practices are critical to promoting resilient reconstruction?

The problem is not unique to the Caribbean or SIDS, but in the islands affected by Hurricanes Maria and Irma compliance with building codes is very low. Participants agreed that incentives to build in line with codes are simply not there. Houses in low-income settlements are often structurally weak because of the materials used and lack of knowledge and skills to build in line with regulations. These informal settlements are also largely ignored in studies of building quality. In Dominica and other volcanic islands, steep slopes and valleys are particularly vulnerable to landslides and riverine floods. Ensuring that the location and construction of settlements take this into account is essential to improving resilience (FCO, 2016).

Added to the complexity of rebuilding in these locations – and the need to provide technical assistance and support to households that have already begun that process – is the very real and looming threat of the next hurricane season, and the likelihood of heavy rainfall and localised flooding, if not another hurricane. Rebuilding needs to happen quickly so that people have shelter, but this should not come at the expense of building resilient public and private infrastructure, and where possible encouraging compliance with existing codes. Migration out of the region has left Caribbean islands with few engineers and planners with the skills needed to promote more resilient building practices. This is a constraint that will need addressing throughout the recovery process. Compounding these problems is the topography, which makes it very difficult to build infrastructure that is resilient. As Minister Baron pointed out: 'we have 365 rivers … and lots of rainfall. We need significant expert advice on how to build infrastructure resilient to these challenges'.

The topic of resilient building practices had already received a good deal of attention in the region before last year's hurricanes, and participants at the event shared examples of good practice in the region and beyond that could usefully be drawn on to guide resilient reconstruction. Participants felt that training local builders and using local materials should be a priority in reconstruction, and in future physical development plans. The issue of compliance with building codes can be tackled in a number of ways, but approaches need to be very different for informal and low-income settlements than formal settlements and infrastructure (whether publicly or privately built). In informal settlements, capacity development is key: people will not be able to build resilient housing without knowledge of the techniques involved, and some financial support. Beyond the buildings themselves, there are many other aspects of construction practice that can help enhance resilience over the long term, as well as offering immediate benefits, and hence a better chance of being adopted. For example, a rainwater harvesting and surface water drainage project implemented in communities in the Eastern Caribbean reduced long-term landslide risk while also enhancing water supply, providing training for community contractors and improving access by reducing mud and debris on footpaths (Anderson and Holcombe, 2013).

For higher-income settlements and infrastructure projects, linking insurance to the enforcement of building codes was discussed, with the incentive that insurance premiums could be reduced where risk reduction measures have been undertaken. Another recommendation was to fund a local structural engineering advisory office to promote the enforcement of building codes (and land use and environmental regulations). The agency could be national, but there are considerable economies of scale and knowledge-sharing opportunities in setting up a regional facility supported by a regional organisation like CDEMA. The Commonwealth can also help in sharing knowledge and expertise on building practices and materials. According to Secretary-General Scotland, 'there is real opportunity to pool expertise on what resilient buildings look like'.

Discussion point 4

How can community perspectives and capacities be engaged to improve recovery planning and governance systems?

There are important opportunities to improve planning processes in recovery by taking community demand and interest seriously and building on community solutions. For example, people self-build and these recovery activities start immediately, but are often ignored by governments and international agencies with their own recovery plans (Twigg et al., 2017), which tend to focus on physical rebuilding and pay less attention to more intangible needs, such as dignity and feeling 'at home', which were often more important to people than just having their house rebuilt. For their part, representatives of these agencies noted that they lack the tools to involve people in long-term recovery and resilience planning.

Policy-makers and practitioners often base their response and recovery plans on knowledge of vulnerability before the disaster, which can be problematic given that disasters typically exacerbate existing inequalities and vulnerabilities; for example, the elderly are often less willing to evacuate and therefore experience serious and direct disaster impacts. Aid agencies and governments also do not fully understand the role social networks play in disaster response and recovery: participants spoke about an assumption of social cohesion in Caribbean communities, but this likely varies between rural and urban areas. The lack of research on recovery processes, particularly social processes, is a major obstacle to promoting resilient recovery.

In terms of the broader governance issues affecting recovery in the region, lack of sovereignty was identified

as a problem in Overseas Territories. In these islands, communities have been disappointed with the level of central government commitment, and it is unclear what local governments have the power to do and what support people can expect from central government.

Involving community capacities and perspectives in a more meaningful way will involve genuine two-way communication, including communicating the government's agenda and budgeting decisions and providing opportunities for communities to respond. Recovery plans will need to provide people with choice and ownership, and consider not just avoiding impacts from events similar to those experienced recently, but also other hazards that affect people more or less frequently, and which may be less visible, though still important. Activities participants recommended, in line with the principles outlined above, included offering technical assistance to households for rebuilding.

Conclusions

Ways forward for resilient recovery in the Caribbean

The roundtable discussions and public event demonstrated the pressing need to link policy-makers with technical experts from academia and the private sector to implement 'building back better' and ensure that future investments and development policies are also risk-informed. It also highlighted the knowledge gaps on recovery processes, including how economies recover and can become more resilient to future events, as well as the role of social networks in recovery.

Recommendations

Cutting across the thematic discussions are a set of policy recommendations for building a more resilient Caribbean after the 2017 hurricanes. These points were raised by stakeholders with very different roles in the recovery process, and demonstrate a high degree of consensus around what is needed to promote resilient recovery. These recommendations need to be shared with policy-makers and practitioners based in the Caribbean, to see how they match up with the priorities that have been identified in recovery plans.

Promoting longer-term investment

Caribbean islands will need to link their recovery plans to longer-term development ambitions and ensure that, not just recovery investments, but all investments in the future, are resilient to the many hazards threatening the region. This is about more than just buildings: islands need to attract investment to develop, use and protect marine and other resources in a sustainable and resilient way. Identifying the immediate co-benefits or dividends that enhance long-term resilience can help make these investments more attractive and more politically tenable.

Championing a locally owned, managed and participatory process

The recovery process will be long and will involve different stakeholders at different times, but it is critical for this to be driven by Caribbean governments, built on community needs and demands. Social pressure for change is high and communities will be supportive of government efforts to promote resilience in recovery, but to ensure continued support a genuine commitment to participatory planning is needed.

Accessing technical capacity, research and data

Caribbean policy-makers and practitioners will be identifying the immediate capacity and knowledge gaps that need to be addressed to implement recovery plans, but a mechanism also needs to be established for soliciting technical expertise, policy advice and research over the coming years.

Advocacy on debt and development finance

Caribbean countries will need support in the coming months and years to articulate their development constraints and needs. They will benefit from help in advocating for changes in development financing rules, and debt restructuring arrangements that allow them to pursue more resilient development models, reducing disaster and climate risks and hence the need to rely on foreign assistance in the future.

Supporting regional institutions

The 2017 hurricanes highlighted once again the vital role of regional organisations, in particular CDEMA, in coordinating local disaster response efforts. Regional development agencies are supporting recovery in affected islands, but lessons need to be shared beyond these places and good models replicated in the future, in the hope that there is no need to ask once again what 'building back better' means in practice.

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