

International Good Practices and Lessons in Post Disaster Reconstruction in The Bahamas



Event Summary

Foreword:

In just the last decade, this island nation saw eight (8) significant hurricanes, with the aftereffects still lingering of Matthew in 2016, Irma in 2017 and, most notably, the category 5 hurricane Dorian in 2019. It is estimated that The Bahamas sustained around \$7.7 billion dollars in economic loss during this time with tens of thousands of its population directly affected by these extreme weather events.

Unfortunately, indications are that **this pattern will continue in concurrence with the exacerbating effects of the COVID-19 pandemic**. This workshop was intended to share international good practices and lessons learned in post disaster reconstruction.

As the leading source of multilateral development financing, The Inter-American Development Bank has proudly been a development partner for The Bahamas for nearly 40 years. In line with our Disaster Risk Management Policy, we remain committed to supporting the Government of The Bahamas in leading the promotion of a comprehensive, multi-sectoral approach to managing disaster risk and climate change adaptation in the Caribbean region. The Bank recently approved a \$600,000 grant project through our Japan Special Fund entitled ‘Capacity Strengthening for a More Resilient Bahamas.’ The objective of this Technical Cooperation project is to support The Bahamas Government specifically for efficient and effective post-Hurricane Dorian reconstruction, as well as to improve the nation’s resiliency against future natural disasters.

Many thanks to all of our guest speakers and a special thanks to Minister of State for Disaster Preparedness, Management and Reconstruction Iram Lewis and his team for working with us as we continue to promote strategic decision making for disaster risk management in The Bahamas.

Thank you!



Daniela Carrera-Marquis
Country Representative | The Bahamas Country Office
The Inter-American Development Bank





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(1) DaLA Team & activities. (2) Country Representative Daniela Carrera-Marquis gives remarks on the DaLA.



International Good Practices and Lessons in Post Disaster Reconstruction in The Bahamas



August 24, 2020 10:00am – 11:30am EST [Watch event](#)

Collaborators:

- The Bahamas Ministry of Disaster Preparedness Management and Reconstruction
- The Bahamas Disaster Reconstruction Authority
- The Bahamas Ministry of Public Works
- The Bahamas National Emergency Management Agency

Keynote Speaker:

- Katherine Smith, The Bahama Disaster Reconstruction Authority

Guest Speakers:

- Daniel M. Best, M.B.A, The Caribbean Development Bank
- Kensuke Otsuyama PhD., The University of Tokyo
- Hideharu Tanaka, The Inter-American Development Bank

Objective of the Workshop:

To share international good practices and lessons learned in post-disaster reconstruction* with The Bahamas national stakeholders.

The objective of the workshop organized by the CBH Preparedness, Reconstruction Recovery Team (P2RCT) was to share international experiences of (i) how “post-disaster public agencies” in each case study country were established, (ii) how they prepared reconstruction (master) plans, and (iii) how they effectively implemented their post-disaster reconstruction programs.

Case study countries and reconstruction programs were specifically selected to reflect the extent of natural hazards effects, the island/regional context, and the magnitude of damage and loss that are relevant and applicable to The Bahamas. The case studies include: Hurricanes Irma/Maria in the British Virgin Islands in 2017; Cyclone Nargis in Myanmar in 2008; and the Tohoku earthquake/tsunami in Japan in 2011.

The workshop included a keynote presentation to share the current status of The Bahamas’ post-Dorian reconstruction.

*Post disaster Reconstruction: The medium and longer-term repair and sustainable restoration of critical infrastructures, services, housing, facilities and livelihoods required for full functioning of a community or a society affected by a disaster (UNDRR, 2015).

Based on these shared experiences, **the speakers provided recommendations** that could be considered when preparing for and implementing future post-disaster reconstruction/recovery programs in The Bahamas.



Agenda

Opening Remarks



Daniela Carrera, Bahamas Country Office Representative, IDB
PS Carl Smith, Ministry of Disaster Preparedness Management
and Reconstruction

Keynote Presentation Current progress in post Dorian reconstruction



Katherine Smith
The Bahama Disaster Reconstruction Authority

Panel discussion

- How “post-disaster public agencies” in each case study country were established,
- How they prepared reconstruction (master) plans, and
- How they effectively implemented their post-disaster reconstruction programs.



Moderator
Yuri Chakalall, Senior DRM Specialist, IDB



Panelists
Daniel M. Best, M.B.A, The Caribbean Development Bank
Kensuke Otsuyama PhD., The University of Tokyo
Hideharu Tanaka, IDB

Open Dialogue/Questions and Answers



Moderator
Franklin Espiga, IDB Consultant

Closing



Maria Eugenia Roca
Bahamas Chief of Operations, IDB



Guest Speakers bios:



Katherine B. Smith, JP, Disaster Reconstruction Authority

Katherine Smith has served her country for more than three decades. Most recently she served as President of the Senate of the Commonwealth of The Bahamas until November 30th, 2019. She currently serves as Managing Director of the Disaster Reconstruction Authority, a new Authority established to lead the reconstruction efforts in the Northern Bahamas in the aftermath of hurricane Dorian. This devastating category 5 storm was the worst natural disaster the island nation has ever suffered. The estimated damages are US\$3.4 billion. In addition to her demonstrated commitment to public service, she has a diverse background with significant leadership experience in the private sector. She has held senior management positions in Public Relations and Marketing, Corporate Affairs, Human Resources and Training, Hotel Operations, and Business and Economic Development. Katherine is Founder and Chairman of the GirlCon Organization. The group focuses on mentoring teenage girls and young women and lives by its mission to “advocate for, inspire and empower girls to be more,” with a vision to ensure “that every girl is valued and empowered to live a life without limits.” She has a Master of Science Degree in Organizational Learning and Leadership (OLL) from Barry University, Miami, Florida and a Bachelor of Science in Management from DeVry University, Magna Cum Laude, Atlanta, Georgia.



Daniel M. Best, M.B.A., Caribbean Development Bank

Daniel Best is Director of the Projects Department at the Caribbean Development Bank (CDB). In this role, he is responsible for the management, pipeline development, appraisal, and implementation of the CDB's lending and technical assistance programs across multiple sectors. Daniel is a civil engineer with a Master of Business Administration from the University of Durham and a project management professional with over 24 years of experience.



Kensuke Otsuyama PhD., The University of Tokyo

Kensuke Otsuyama is a Researcher at the Research Center for Advanced Science and Technology in The University of Tokyo. He holds a Ph.D. degree of Engineering at Architecture Department in Graduate School of Engineering, Kyoto University. His main research interest is pre-disaster recovery and reconstruction planning in Japan, the United States, and ASEAN countries.



Hideharu Tanaka, Inter-American Development Bank

Hideharu Tanaka is a Principal Sector Advisor in disaster risk management at the IDB, on secondment from Ministry of Finance, Government of Japan. He formerly served as a Director at Ministry of Foreign Affairs responsible for Japan's official development assistance (ODA) for Latin America and the Caribbean region. He also served as a Counsellor at the Cabinet Legislation Bureau and participated in establishing the legal framework for reconstruction from Great East Japan Earthquake of 2011. He holds a B.A. in Law from the University of Tokyo and an LL.M. from the University of Cambridge.

Disaster Reconstruction Authority Summary Presentation



In the context of the International Workshop on “Good Practices and Lessons Learned in Post-Disaster Reconstruction” held on August 24, 2020, the government authorities of The Bahamas delegated Ms. Katherine Forbes Smith as keynote speaker to open the series of technical presentations included in the workshop.

Ms. Smith presented an overview of the reconstruction strategy in The Bahamas after the impact and the events that occurred as a consequence of Hurricane Dorian, including the vision of the risks and challenges encountered in the process.

Likewise, she described the DRA's priority areas in the reconstruction process and strategy (Fig. 1), emphasizing those aspects related to the care and preservation of the environment, as well as the priority on the recovery of critical sectors for the country and its population, such as housing, health sector facilities, and infrastructure in general.

One aspect of special importance that she highlighted was the management of financial resources to undertake the work associated with the strategic plans of the DRA. She described the budget flow through government contributions, donations, and grants, as well as incentivizing local and international private sector participation through joint participation initiatives, such as public-private partnerships.

Ms. Smith also mentioned that the efforts made, have already allowed one year after the occurrence of the event, to undertake recovery and

improvement of critical public service systems, municipal waste management, development of landfills and emphasizing new and friendly technologies, as is the case of Solar Energy developments.

Finally, she presented a summary of the challenges and risks that they have encountered in the process, for discussion with the rest of the panelists, with the objective of taking ideas from the lessons learned and best practices in other countries, and their applicability in the Bahamas case.

Figure 1. DRA Priorities





DRA coordination and reconstruction activities – Hurricane Dorian.



Lessons learned from natural disasters worldwide

explored in relation to The Bahamas post-Dorian reconstruction



Cyclone Nargis in Myanmar, 2008

Otsuyama is currently a researcher at the Research Center for Advanced Science and Technology at the University of Tokyo. He selected this case study because this catastrophic event was a turning point for the national government of Myanmar to start developing a national policy for disaster risk reduction.

Cyclone Nargis, a category 4 cyclone, killed +138,000 and affected 2.4 million people. More than 4,000 schools and countless homes were destroyed, and around 6,000 villages were entirely or partially destroyed. Total economic losses due to this cyclone amounted to nearly US\$9.6 billion (equivalent to roughly 30 percent of GDP in 2008).

The national government embarked on the post-recovery process immediately after the disaster. It established a new national institution for reconstruction, called the National Disaster Preparedness Central Committee (later changed to the National Disaster Management Committee, or NDMC). It issued the National Reconstruction Plan three months after the cyclone as a general framework for reconstruction. It published the Post-Nargis Recovery and Preparedness Plan seven to eight months following the cyclone, and it issued the Myanmar Action Plan for Disaster Risk Reduction in 2012, four years after the cyclone.

Despite these policy initiatives taken immediately after the 2008 catastrophe, another disaster

event—heavy floods and landslides—struck in 2015, affecting different areas and communities than those damaged by Cyclone Nargis in 2008. Otsuyama said that the incident revealed that local governments and communities still lacked disaster risk management capacity, even though the national government had begun to make great strides following the cyclone.

One of the critical lessons learned was the need for the national government to provide practical support to all vulnerable local municipalities and communities. The national government of Myanmar created a national training center as a countermeasure to effectively perform knowledge transfer and capacity development to the local government and communities.

In view of these events, Dr. Otsuyama provided the following three recommendations to the Bahamian authorities to improve reconstruction and resilience:

- It takes time to implement all activities for disaster risk reduction at the local level. National stakeholders need to provide more support to strengthening local capacity so that municipalities and communities can sustainably implement disaster risk reduction actions by themselves.
- A national disaster management training center would be sufficient for The Bahamas to transfer knowledge from national to local governments and share local knowledge among the islands.
- International organizations, NGOs, and

academia have key roles to play in successfully performing high-quality services of the national training center. The national government has a fundamental role to play in operating the center.

Great Tohoku Earthquake and Tsunami, Japan, 2011



Mr. Tanaka, currently principal sector advisor of the IDB, selected this case study because he worked as a counselor in the Cabinet Legislative Bureau of Japan and was heavily involved in the development of a legal framework for reconstruction after the Great Tohoku earthquake and tsunami that occurred in northeastern Japan in 2011.

This earthquake, measuring a magnitude of 9.0, was one of the largest and deadliest earthquakes in the modern era. Following the quake, massive tsunamis struck the coastal areas of eastern Japan, sweeping away entire cities. The tsunamis also severely damaged nuclear power plants. Total fatalities were approximately 20,000 (of which some 3,000 are still missing). More than 120,000 homes were destroyed. Economic losses directly incurred by the earthquake/tsunamis are estimated at US\$ 170 billion (more than 3 percent of GDP and 20 percent of the national budget). Economic activities in the eastern half of Japan (including the greater Tokyo metropolitan area) were paralyzed for a month.

Because the damage was so massive, the road-map for reconstruction was extended, including the following five steps and policy initiatives:

- 1. Estimate the damage caused by the earthquake and tsunamis.** An emergency response headquarters was set up on the day of the earthquake, headed by the Prime Minister, with all of the ministers as members. During the first several days

of the rescue operation, the damage was found to be enormous. The first task was to calculate the damage. In June 2011 (three months after the earthquake), the Cabinet Office announced officially that the total amount of damages was estimated at US\$170 billion. This amount formed the basis for the subsequent reconstruction plan and its financial framework.

- 2. Set up a long-term reconstruction plan.**

Soon after the emergency rescue operation was concluded, the entire government embarked on a robust discussion on the principles of reconstruction. The Diet approved the Basic Law for Reconstruction at the end of June, or three months after the disaster. This law required the Cabinet to establish a long-term reconstruction plan based on the idea of “build back better.” The Cabinet adopted a Basic Plan for Reconstruction in late July. The first five years of this 10-year Plan were called the “Intensive Reconstruction Period.”

- 3. Estimate fiscal demand for reconstruction and secure financial resources.**

The balanced fiscal framework backed up the Basic Plan for Reconstruction. The fiscal demand for reconstruction was estimated at US\$190 billion. The Ministry of Finance had to find out a way to raise this additional revenue. Temporary additional taxes were introduced on personal income and corporate incomes. The government of Japan had to sell stocks in public enterprises.

- 4. Set up a structure for implementing a reconstruction plan with a solid legal framework.**

The Reconstruction Agency was established with a detailed legal framework. The Diet approved the law for establishing the agency and amended the existing laws at the end of November 2011. The Reconstruction Agency began its operation on February 10, 2012, nearly 11 months after the earthquake. This would seem to be a

slow start. However, the Agency's operation has been smooth and efficient thanks to the enactment of a solid legal framework.

- 5. Steady implementation of the reconstruction plan with periodic revision.** Finally, but most importantly, implementation of the reconstruction plan was monitored and revised periodically. In addition to the annual report to the Diet, the cabinet went through comprehensive revision of the reconstruction plan at the end of the five-year Intensive Reconstruction Period. The Reconstruction Agency was initially established for a fixed term of 10 years. But recently, the term was extended for another 10 years to ensure that the reconstruction is completed.

Based on these experiences, Mr. Tanaka pointed out the three pragmatic recommendations to strengthen the institutional framework for Bahamas' post-Dorian reconstruction:

- **Clear and strong mandate.** The DRA should have a clear mandate and authority, which enables the agency to discharge its mission. For example, it should have the power to make recommendations to other ministries and local governments for reconstruction.
- **Budget management.** Special accounts for reconstruction should be established, and all the revenue and expenses related to reconstruction should be included in this account. The DRA should serve as the manager of this special account. This will ensure that the financial resources are properly and clearly managed.
- **Recruitment of staff.** In Japan, around 200 staff were working in the Reconstruction Agency. Since the agency was newly created, it was essential to recruit staff with expertise. Most of the staff were seconded from relevant ministries for typically two to three years. Some of them were from the

local government and the private sector, which would apply to The Bahamas because this ensures smooth coordination among public institutions and between public and private entities.

Hurricanes Irma/Maria in the British Virgin Islands, 2017



Daniel Best, director of the Caribbean Development Bank (CDB), selected this case study because this is an ongoing initiative. Hurricane Irma struck the British Virgin Islands (BVI) in September 2017 as a Category 5 hurricane. It caused widespread destruction of infrastructure and households on the whole island.

The damage assessment after the hurricane estimated the damages and losses at US\$3.5 billion, which is three times greater than the national GDP. Tourism, the country's main industry, was the most devastated sector, suffering US\$2 billion in damages and losses. The water sector, electricity network, road networks, government buildings, schools, and police stations were all severely damaged.

The government of BVI approved a Recovery and Development Act soon after the hurricane. The Plan was a comprehensive policy directive to manage overall recovery efforts. One of the policy directives was to establish a Recovery and Development Agency (RDA), which would be in charge of managing overall recovery efforts after the hurricane. The RDA is funded by the government of the United Kingdom, BVI, and other donors.

Best explained that the CDB's role is to provide initial support through an Emergency Response Grant to provide emergency supplies and services. CDB also approved an immediate loan to clean up and restore essential services, and a capital loan to BVI to support reconstruction and rehabilitation efforts. All these are anchored

within the CDB's disaster management and recovery strategies and operational guidelines that aim to respond to member countries' immediate needs immediately after the disaster.

Best outlined some of the lessons learned from the case of BVI. He mentioned that the immediate response needs design should be tailored to the country's particular needs, rather than the preestablished CDB disaster management and recovery strategies. Another lesson was the importance of community engagement and participation in rehabilitation and reconstruction. He insisted that project ownership and engagement of the impacted communities are key for successful and sustainable resiliency. Best also mentioned the importance of project design (for post-disaster immediate operations) that should include features to build long-term resilience, such as early warning and emergency communication facilities for preparing for future disasters and response.

Best underscored the importance of the RDA in narrowing the financial gap for the reconstruction. This includes reconstruction agencies that would need to become more marketable for catalyzing resources from donor agencies and the private sector.

Based on the ongoing reconstruction process in BVI, Best offered the following lessons and recommendations for a better reconstruction process of The Bahamas:

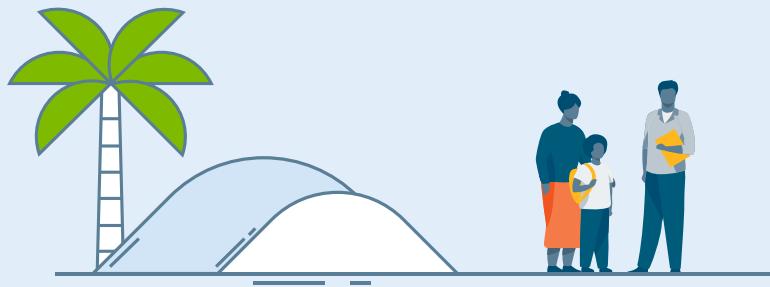
- Timely procurement of engineering consultants to undertake designs of infrastructure and respond to immediate needs. Engineering design takes time, including expressions of interest, requests for proposal, and the evaluation process. Speeding up the procurement process is also key for successful reconstruction. Establishing a preexisting framework to speed up procurement in case of emergency should be considered. Preapproval of consultancies from a pool of consultants is another alternative.
- Consultation with a wider range of relevant stakeholders for reconstruction planning is also key. This is necessary, especially for sustainable long-term reconstruction efforts. These stakeholders include sectoral ministries (e.g., public works, environment) as well as communities. The communities that are most impacted should be involved during reconstruction planning to ensure their ownership of the reconstruction effort's outcome over a longer time period. National institutions should make the communities impacted by disasters the primary beneficiaries of the reconstruction efforts. Consultation with the communities at an early stage is key to meeting their needs.



Workshop Take-Away



- **It is important to honor the memory of the victims of Hurricane Dorian.** Those who lost their lives, and the impact on surviving families affected, represent a fundamentally important starting point and spiritual reminder of the need for getting Post-Disaster Reconstruction right, in order to avoid and avert repetition of this type of tragedy in the future.
- **It is imperative, going forward (ex-ante), to pay greater attention and make more investment in governance, public-private coordination, and financial and legal structures to enable resilient livelihood recovery, and rapid and resilient reconstruction when there is significant national or localized catastrophic impact.** Increasing and preparing national capacity in standardized damage and loss estimation, enabling expedited procurement for reconstruction, and public-private partnership schemes for reconstruction are all priority areas for attention. Investments in training and the development of novel mechanisms to build financing for future reconstruction are also of paramount importance.
- **While international best practices are replete with guidance that is applicable to the needs of The Bahamas' current and future resilient post-disaster reconstruction approaches, participation by residents and communities of Grand Bahamas and Abaco is essential to the success of reconstruction planning and implementation.** Customized reconstruction is important based on the unique culture, rich biodiversity, and beautiful natural environment peculiar to these islands.
- **Well-conceived resilient reconstruction investments offer an opportunity for small states to reset, restructure, and reform their economic sectors by introducing new infrastructure and technologies to be more resilient, to enable greater growth, while generating more sustainable livelihood opportunities for citizens.** Such investments offer dividends of future disaster loss reduction, safer environments for capital projects which enable economic growth opportunities, and greater environmental and social benefits.
- **All Bahamians, public and private organizations, academic institutions, NGOs must see this catastrophe as their own and participate and contribute to the reconstruction through solidarity.**



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