

IDB Dala Assessments - Synthesis

Joaquin, Matthew, Irma and Dorian

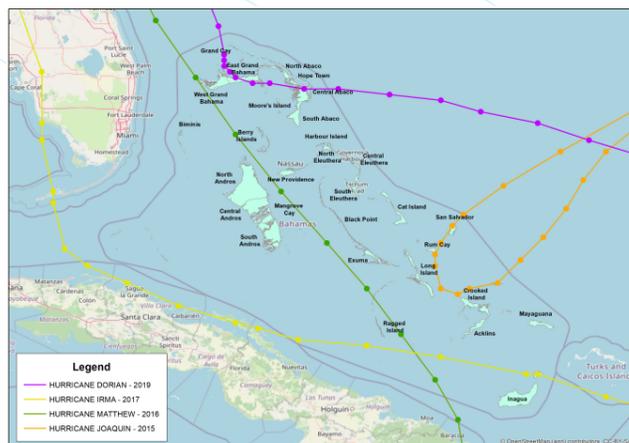


BACKGROUND

Intensive hazard events, namely disasters or catastrophes, give rise to significant damages and losses. **Damage and loss assessment is recognized as essential to expedite the post-disaster recovery process and as basis for subsequent resilient building.** Governments often use these assessments to plan and finance recovery efforts. The Bahamas has experienced the ferocity of four major hurricanes within the past seven years. Hurricanes Joaquin, Matthew, Irma, and Dorian have left indelible marks on the Bahamian landscape. The Inter-American Development Bank (IDB), in cooperation with ECLAC, has conducted Damage and Loss Assessments (DaLA) following each of the events mentioned above, measuring their economic, social, and environmental impacts on the Bahamas. **This infographic synthesizes the findings and key aspects of the effects and damage assessments and the reports of these four events.**

	Affected Population	Total Damage & Losses (\$ Millions)
JOAQUIN	3,094	119.6
MATTHEW	8,931	580.3
IRMA	419	130.8
DORIAN	29,472	3,401.2

TRAJECTORY OF EVENTS



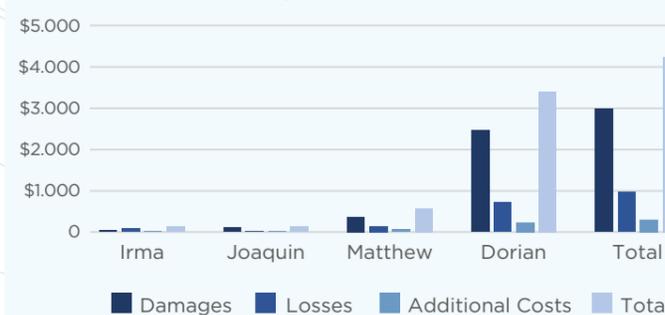
INTENSITY OF EACH HURRICANE

Hurricane	Maximum Strength (Category)
Joaquin (2015)	4
Matthew (2016)	4
Irma (2017)	5
Dorian (2019)	5

DEATH AND SEVERE INJURIES PER EVENT

Hazard-event	Total number of deaths	Total number of serious injuries
Hurricane Joaquin	0	0
Hurricane Matthew	0	0
Hurricane Irma	0	0
Hurricane Dorian	67 confirmed deaths and 282 persons missing	200+

IMPACT DAMAGES, LOSSES AND ADDITIONAL COST



IMPACT BY SECTOR

Sector	Joaquin	Matthew	Irma	Dorian	Total
Housing	\$2.0	\$222.2	\$17.3	\$1,610.0	\$1,851.5
Education	\$1.6	\$4.8	\$3.1	\$98.3	\$107.8
Health	\$37.4	\$3.0	\$0.7	\$64.4	\$105.6
Infrastructure, Power; Telecommunications; Water & Sanitation; Road, Ports & Airports	\$59.8	\$96.1	\$26.5	\$452.5	\$634.9
Tourism	\$6.0	\$219.1	\$68.7	\$869.9	\$1,163.7
Other (Environment, Fisheries, and Agriculture)	\$12.7	\$35.1	\$14.7	\$308.0	\$370.5
Total	\$119.6	\$580.3	\$130.8	\$3,403.2	\$4,234.0

RESILIENCE RECOMMENDATIONS

- » **Understanding risk:** a comprehensive hazard, vulnerability, and risk assessment integrating the National Hurricane Centre's model: (SLOSH) as described in DALA Assessment reports.
- » **Risk reduction:** (1) strengthening the country's building codes and related compliance and monitoring mechanisms, (2) settlement relocation across the length and breadth of The Bahamas (3) the further implementation of "green" and "grey" measures among other.
- » **Disaster preparedness:** (1) enhancement of evacuation and shelter procedures, (2) the Decentralization of DRM efforts, (3) establishment of donations and volunteer management plans, (4) capacity building initiatives in the space of disaster management (5) Disaster education activities for citizens and vulnerable communities and, (6) Strengthened early warning systems.
- » **Financial protection measures:** (1) revise utility tariffs to include DRM activities (2) mandatory insurance of public facilities, including utilities and (3) greater investment in catastrophe insurance and CAT-Bonds.
- » **Recovery:** (1) enforcement of building codes during reconstruction, (2) consideration of additional mitigative measures to avoid the reproducing risk and (3) promotion of healthy ecosystems as first line of defense

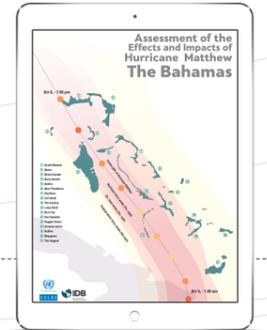
CONCLUSIONS

- » The Bahamas has lost over **4.2 billion (USD)** due to various hydrometeorological events in the past seven years.
- » Over time, loss, damages, and additional costs due to the impact of these disasters are increasing.
- » The tourism sector, the primary economic engine of the county, has seen losses of approximately **1.2 billion (USD)** in the past seven years due to disasters.
- » Damage to the housing sector for these four events swelled a staggering **1.9 billion dollars (USD)**.
- » Hurricane Dorian was the costliest event - **3.4 billion (USD)**.
- » Over time, The Bahamas is experiencing more intense hurricanes.
- » Grand Bahama Island is experiencing consistent impacts from hurricanes traversing through The Bahamas; therefore, increasing loss and damages.
- » Hurricane Dorian was the only hazard event in the past decade to result in death and injuries in The Bahamas.

DAMAGE ASSESMENTS REPORTS

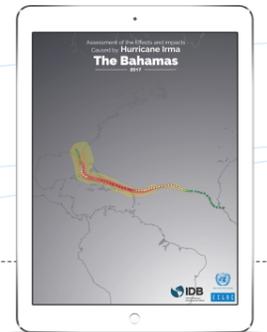
ASSESSMENT OF THE EFFECTS AND IMPACTS OF HURRICANE MATTHEW, THE BAHAMAS

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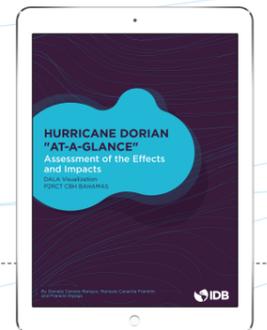
ASSESSMENT OF THE EFFECTS AND IMPACTS CAUSED BY HURRICANE IRMA, THE BAHAMAS 2017

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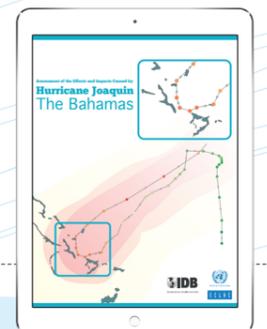
HURRICANE DORIAN "AT-A-GLANCE" ASSESSMENT OF THE EFFECTS AND IMPACTS DALA VISUALIZATION

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ASSESSMENT OF THE EFFECTS AND IMPACTS CAUSED BY HURRICANE JOAQUIN THE BAHAMAS

(NOT YET PUBLISHED)



IDB Data Assessments - Synthesis

Joaquin, Matthew, Irma and Dorian



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