

HOUSEHOLD AND BUILDING DAMAGE ASSESSMENT (HBDA)

RATIONALE

Since 2017, the Household and Building Damage Assessment (HBDA) has been an integral component of UNDP’s post-crisis response. Developed in the aftermath of Hurricanes Irma and Maria in the Caribbean, the HBDA enables UNDP Country Offices and national authorities to rapidly assess damage to housing, commercial buildings, and public infrastructure. Through successive deployments in diverse crisis contexts, the HBDA has been continuously refined to generate critical, real-time data that supports targeted, resilient, and timely recovery.

PURPOSE

The HBDA questionnaire captures key information on structural damage, household vulnerability, access to services, debris, and preparedness for future crises. It enables comprehensive assessment across multiple dimensions:

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Structural Damage: Assesses damage to private homes, commercial buildings, and public infrastructure such as schools, clinics, administrative buildings, fire and police stations.
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Debris Management: Determines the volume, type, location, recyclability, and hazards associated with debris; estimates the cost of debris removal and identifies recycling opportunities and hazardous waste solutions.
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Cost Estimation: Provides automatic classification of damage severity and generates programme-level cost estimates to inform reconstruction efforts.
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Vulnerability Analysis: Evaluates general vulnerability levels of residents; assesses each household’s vulnerability and prioritizes them for assistance.
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Preparedness and Resilience: Captures household preparedness for future crises and supports the development of localized building guides.
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Resilient Building Practices: Facilitates training for homeowners and builders on safer, resilient construction practices.

KEY FEATURES

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Data-Driven: Provides reliable evidence to inform targeted decisions on repairs, resilient reconstruction, service restoration, debris management, and livelihood recovery.
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End-to-End Digital: Enables rapid, high-quality data collection, analysis, and visualization.
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Technology-Enabled: Incorporates satellite imagery, drone footage, and 360° audiovisual content to enhance situational awareness and guide assessment design.
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Flexible & Modular: Adapts to different crises, languages, and local contexts, supporting both rapid and comprehensive assessments.
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Multi-Use & Standardized: Feeds into humanitarian, recovery, and development planning using rigorous, comparable indicators.
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Collaborative & Scalable: Strengthens local capacities by working closely with governments, partners, and field teams.

REAL WORLD IMPACT

These data-driven insights have enabled resilient reconstruction, shaped policies, and supported livelihoods—laying the groundwork for long-term recovery and sustainable development.



Reconstruction & Housing Resilience

In Vietnam, post-flood HBDA data enabled the repair of over 3,000 homes in five provinces, integrating storm- and flood-resilient design while prioritizing the most vulnerable families.



Policy & Emergency Planning

In Honduras, assessment findings helped shape risk-aware municipal emergency plans and contributed to a national roadmap for disaster preparedness with the Honduran Association of Municipalities.



Livelihoods & Debris Management

In Equatorial Guinea, HBDA informed post-explosion Cash for Work programming in Bata, where 100 community members safely disposed of and recycled nearly 1,000 cubic meters of debris, supporting recovery and restoring livelihoods.

