# National Disaster Preparedness

Baseline Assessment

PDC | GLOBAL
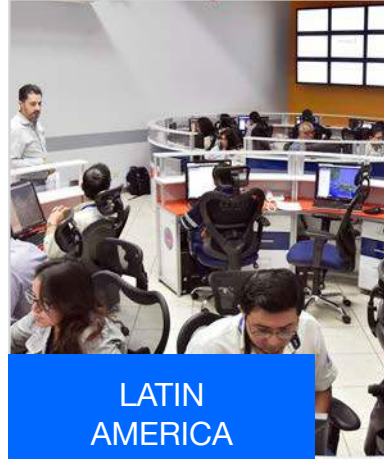
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# Safer world.

# It's more
than just an assessment

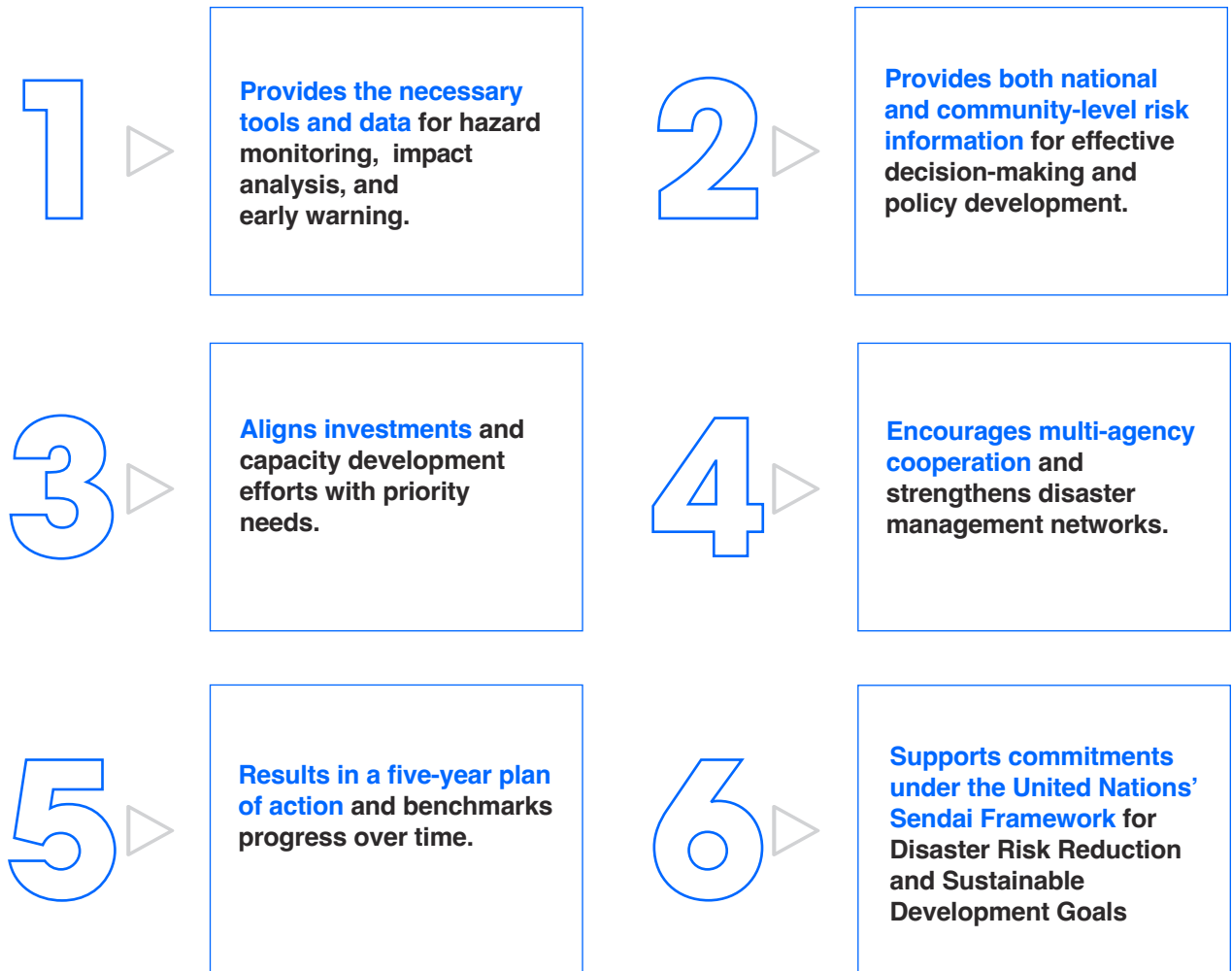AFRICA

LATIN AMERICA

SOUTHEAST ASIA

**35+**
Participating Nations

U.N. AWARD-WINNING

# National Disaster Preparedness
## Baseline Assessment

To be truly effective, decision makers must understand the underlying drivers of disaster risk and be able to easily access this information and apply it throughout all phases of disaster management. PDC's National Disaster Preparedness Baseline Assessment program helps countries assess risk and disaster management capacity and apply it to **early warning, disaster preparedness, policy and planning, sustainable development, and resilience-building initiatives**. The NDPBA is the only program recognized by the United Nations to help countries operationalize the goals of the Sendai Framework for Disaster Risk Reduction—providing an evidence-based foundation for actions to be taken and investments to be made in achieving long-term resilience and sustainability.

**1** ▷ **Provides the necessary tools and data** for hazard monitoring, impact analysis, and early warning.

**2** ▷ **Provides both national and community-level risk information** for effective decision-making and policy development.

**3** ▷ **Aligns investments** and capacity development efforts with priority needs.

**4** ▷ **Encourages multi-agency cooperation** and strengthens disaster management networks.

**5** ▷ **Results in a five-year plan of action** and benchmarks progress over time.

**6** ▷ **Supports commitments under the United Nations' Sendai Framework** for Disaster Risk Reduction and Sustainable Development Goals
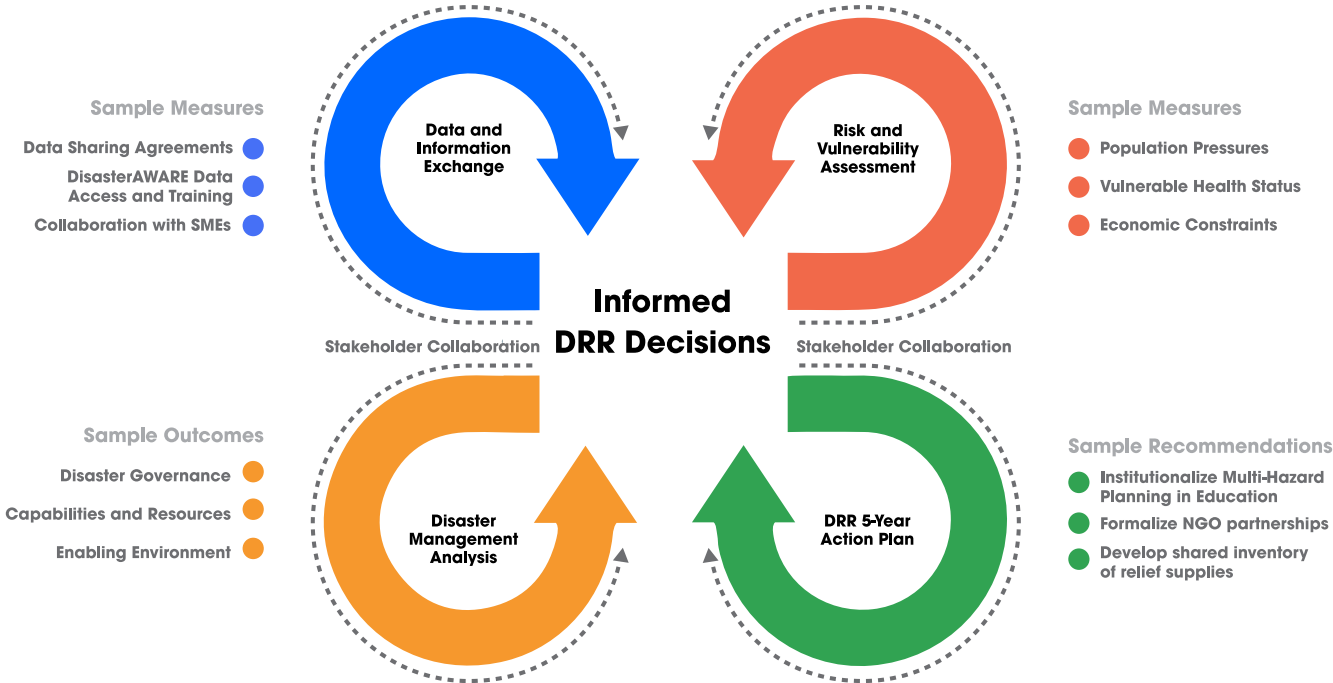
# Our **Process**



The national baseline assessment program is designed as a sustainable system for accessing, understanding, updating, and applying critical risk information at all levels of decision making. The program provides the necessary tools, scientific data, and evidence-based practices to effectively reduce disaster risk—informing decisions at the national, subnational, and local level.

The assessment is conducted using a collaborative, stakeholder-driven approach that integrates national priorities and stakeholder feedback throughout every step of the process.

Our process includes a **Risk and Vulnerability Assessment (RVA)** which examines several components of risk including exposure to hazards, vulnerability, coping capacity, and existing disaster management capabilities. These findings are further analyzed through the lens of PDC's **unique Disaster Management Analysis (DMA)**. The DMA contextualizes the RVA and guides recommendations designed to increase resilience and reduce disaster risk. Findings of this analysis are compiled into a Disaster Risk Reduction (DRR) Plan offering practical actions to be taken over a five-year period.

# Collaborative Approach

**Sample Measures**
- Data Sharing Agreements
- DisasterAWARE Data Access and Training
- Collaboration with SMEs

**Data and Information Exchange**

**Risk and Vulnerability Assessment**

**Sample Measures**
- Population Pressures
- Vulnerable Health Status
- Economic Constraints

Stakeholder Collaboration

**Informed DRR Decisions**

Stakeholder Collaboration

**Sample Outcomes**
- Disaster Governance
- Capabilities and Resources
- Enabling Environment

**Disaster Management Analysis**

**DRR 5-Year Action Plan**

**Sample Recommendations**
- Institutionalize Multi-Hazard Planning in Education
- Formalize NGO partnerships
- Develop shared inventory of relief supplies

# Risk & Vulnerability Assessment
## Methodology

PDC's Risk and Vulnerability Assessment (RVA) is a multi-dimensional analysis that measures hazard exposure and the social, cultural, and economic drivers of risk at the national and subnational level. The assessment conceptualizes risk as a function of Multi-Hazard Exposure, Vulnerability, Coping Capacity, and Disaster Management Capabilities.
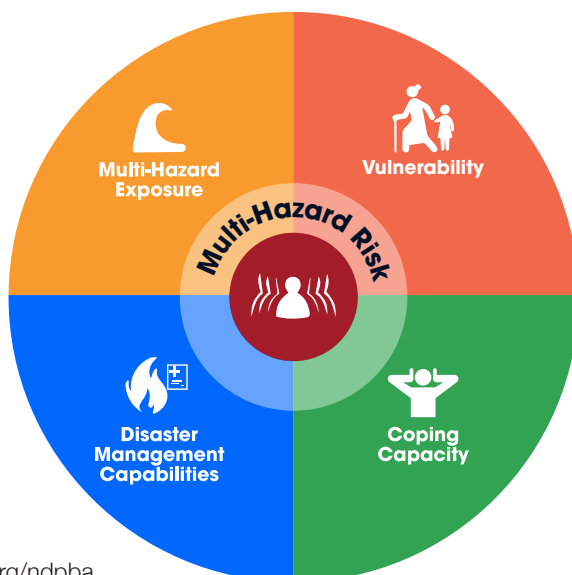
▷ **Multi-Hazard Exposure**

Includes natural, manmade and biological hazards
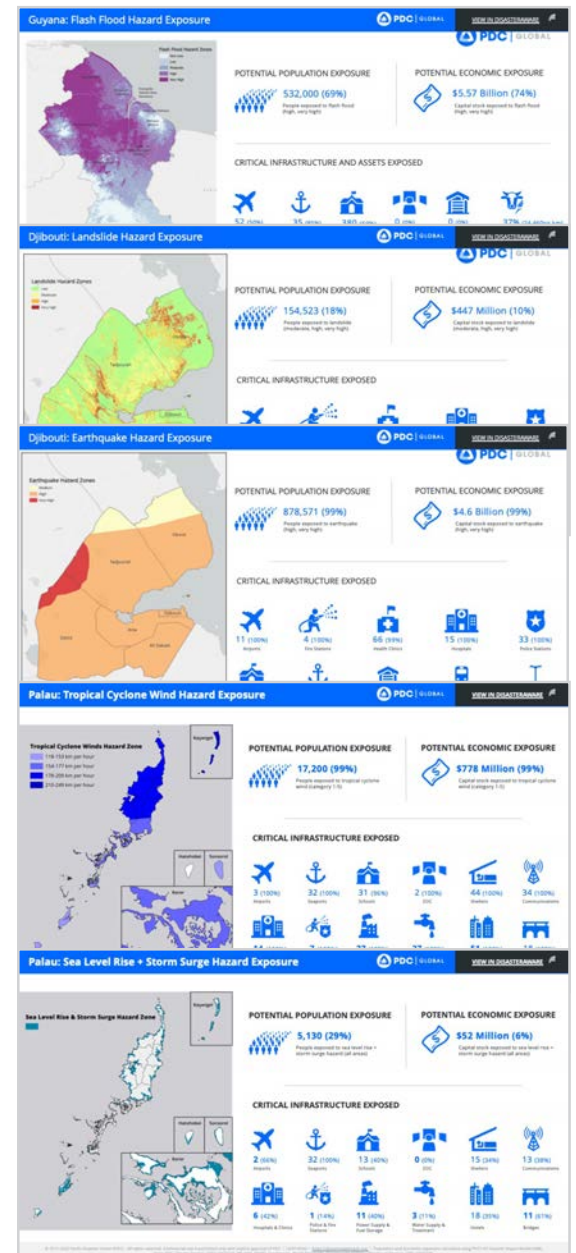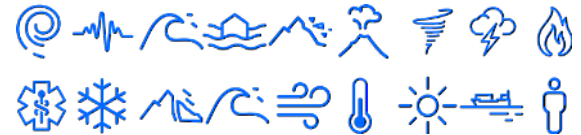




▽ **Components of Risk**

# Risk & Vulnerability Assessment
## **Methodology**

## **Vulnerability**
### Sample Subcomponents



- Population pressures
- Gender inequality
- Economic constraints
- Information access
- Clean water access
- Health status
- Environmental stress
- Conflict
- Recent disaster impacts



**VULNERABILITY BY DISTRICT**

| RANK | DISTRICT | INDEX SCORE | RANK | DISTRICT | INDEX SCORE |
|---|---|---|---|---|---|
| 1 | Chitawan | 0.928 | 40 | Kabhrepalanchok | 0.530 |
| 2 | Kailali | 0.902 | 41 | Baitadi | 0.527 |
| 3 | Rupandehi | 0.839 | 42 | Dailekh | 0.511 |
| 4 | Kanchanpur | 0.836 | 43 | Rukum West | 0.505 |
| 5 | Nawalparasi East | 0.827 | 44 | Ramechhap | 0.504 |
| 6 | Bardiya | 0.815 | 45 | Arghakhanchi | 0.501 |
| 7 | Morang | 0.774 | 46 | Sankhuwasabha | 0.501 |
| 8 | Rautahat | 0.764 | 47 | Doti | 0.496 |
| 9 | Parsa | 0.758 | 48 | Kathmandu | 0.490 |
| 10 | Makawanpur | 0.736 | 49 | Parbat | 0.471 |
| 11 | Bara | 0.723 | 50 | Ilam | 0.457 |
| 12 | Sunsari | 0.717 | 51 | Rasuwa | 0.454 |
| 13 | Surkhet | 0.713 | 52 | Darchula | 0.446 |
| 14 | Kapilvastu | 0.712 | 53 | Myagdi | 0.442 |
| 15 | Dang | 0.710 | 54 | Dhankuta | 0.442 |
| 16 | Dhading | 0.708 | 55 | Dolakha | 0.437 |
| 17 | Sarlahi | 0.704 | 56 | Bajhang | 0.437 |
| 18 | Dhanusha | 0.695 | 57 | Rukum East | 0.432 |
| 19 | Nawalparasi West | 0.694 | 58 | Gulmi | 0.419 |
| 20 | Tanahu | 0.691 | 59 | Panchthar | 0.406 |
| 21 | Gorkha | 0.685 | 60 | Bhojpur | 0.402 |
| 22 | Mahottari | 0.684 | 61 | Baglung | 0.398 |
| 23 | Saptari | 0.662 | 62 | Khotang | 0.397 |
| 24 | Jhapa | 0.661 | 63 | Okhaldhunga | 0.395 |
| 25 | Siraha | 0.660 | 64 | Jumla | 0.395 |
| 26 | Palpa | 0.660 | 65 | Lalitpur | 0.385 |
| 27 | Udayapur | 0.656 | 66 | Manang | 0.383 |
| 28 | Kaski | 0.652 | 67 | Rolpa | 0.381 |
| 29 | Dadeldhura | 0.643 | 68 | Dolpa | 0.358 |
| 30 | Banke | 0.642 | 69 | Taplejung | 0.356 |
| 31 | Sindhuli | 0.635 | 70 | Humla | 0.349 |
| 32 | Syangja | 0.623 | 71 | Bajura | 0.349 |
| 33 | Nuwakot | 0.611 | 72 | Solukhumbu | 0.330 |
| 34 | Salyan | 0.609 | 73 | Bhaktapur | 0.329 |
| 35 | Sindhupalchok | 0.569 | 74 | Kalikot | 0.325 |
| 36 | Lamjung | 0.564 | 75 | Terhathum | 0.324 |
| 37 | Achham | 0.562 | 76 | Mugu | 0.319 |
| 38 | Jajarkot | 0.555 | 77 | Mustang | 0.310 |
| 39 | Pyuthan | 0.550 | | | |



**Vulnerability Index Level and Rank**
- Very Low (Ranks 62-77)
- Low (Ranks 46-61)
- Moderate (Ranks 31-45)
- High (Ranks 16-30)
- Very High (Ranks 1-15)
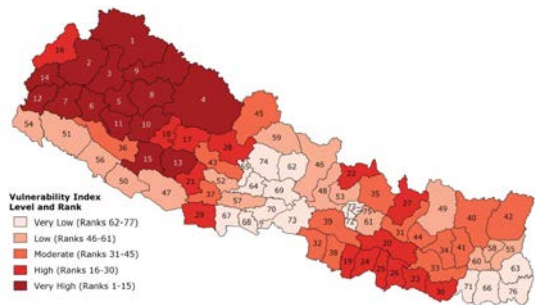
# Coping Capacity
Sample Subcomponents



- Environmental capacity
- Economic capacity
- Governance
- Infrastructure Capacity

| | RANK | STATE | INDEX SCORE |
|---|---|---|---|
| VERY HIGH | 1 | Koror | 1.000 |
| | 2 | Airai | 0.934 |
| HIGH | 3 | Kayangel | 0.867 |
| | 4 | Melekeok | 0.800 |
| | 5 | Ngarchelong | 0.734 |
| MEDIUM | 6 | Ngchesar | 0.667 |
| | 6 | Angaur | 0.667 |
| | 7 | Peleliu | 0.534 |
| | 8 | Ngardmau | 0.467 |
| LOW | 8 | Aimeliik | 0.467 |
| | 9 | Ngaraard | 0.334 |
| | 10 | Ngiwal | 0.267 |
| | 11 | Ngatpang | 0.200 |
| VERY LOW | 11 | Ngaremlengui | 0.200 |
| | 12 | Sonsorol | 0.067 |
| | 13 | Hatohobei | 0.000 |

**Coping Capacity Index Level and Rank**

- Very Low (Ranks 13-16)
- Low (Ranks 9-12)
- Moderate (Ranks 6-8)
- High (Ranks 3-5)
- Very High (Ranks 1-2)
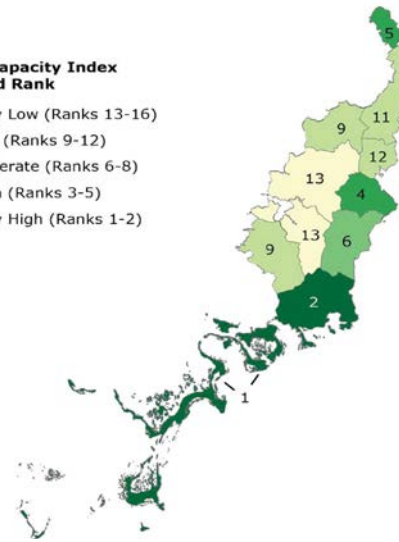


# Disaster Management Capabilties
Sample Subcomponents

- Early warning and monitoring
- Mass care support
- Disaster finance
- Emergency services

# Disaster Management Analysis
## Methodology

RISK AND VULNERABILITY RESULTS



Vulnerability | Multi-hazard Exposure | Coping Capacity | DM Capabilities
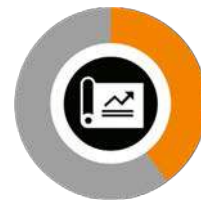
**Disaster Management Analysis**

- Institutional Arrangements
- Enabling Environment
- Disaster Governance Mechanisms
- Capabilities and Resources
- Capacity Development
- Communication and Information Management

National | Subnational | Local

Stakeholder Collaboration

RECOMMENDATIONS

PDC's Disaster Management Analysis (DMA) enables more effective prioritization of risk-reduction and resilience-building initiatives by contextualizing the results of the RVA through the lens of the disaster management framework. Taking into consideration diverse community needs, operational successes and barriers, the analysis considers six key disaster management themes and produces recommendations designed to strengthen capabilities and reduce losses.

### Disaster Management Analysis
Example results
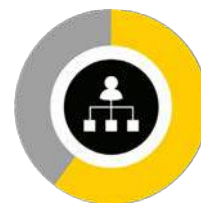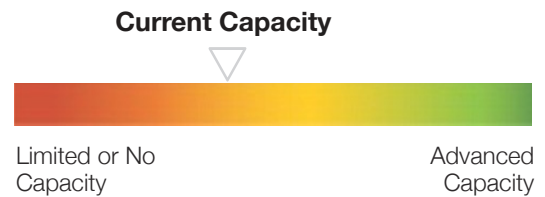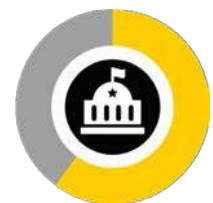
**Current Capacity**

Limited or No Capacity — Advanced Capacity



Institutional Arrangements

Enabling Environment

Disaster Governance Mechanisms
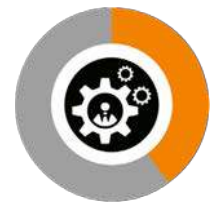
Capabilities and Resources

Capacity Development

Communication and Information Management

## Sample Recommendations

### ENABLING ENVIRONMENT: GHANA

**FINDINGS**

Legal Instruments – DM Law

The National Disaster Management Organisation (NDMO) Act of 2016 outlines various financial provisions, i.e., the Disaster Management Fund (DMF), to support the execution of disaster management activities.

Codifying these provisions in law is a positive step. However, in practice, a fully funded DMF is largely aspirational and would require additional policy and procedures to operationalize.

**RECOMMENDATIONS**

- Amend the NDMO Act to establish compliance mechanisms for the funding of the DMF.
- Identify and designate multiple funding sources to support the DRM Fund, set minimum annual targets (e.g., 2% of GDP), and ensure funding designations are incorporated into the NDMO Act.
- Establish mechanisms to transfer funds to regional and local governments and disaster committees.

**ALIGNMENT**

Sendai Framework, Paris Agreement, and SDGs
Advanced

Priorities for Action
2, 3, 4

Global Target(s)
A, B, C, D

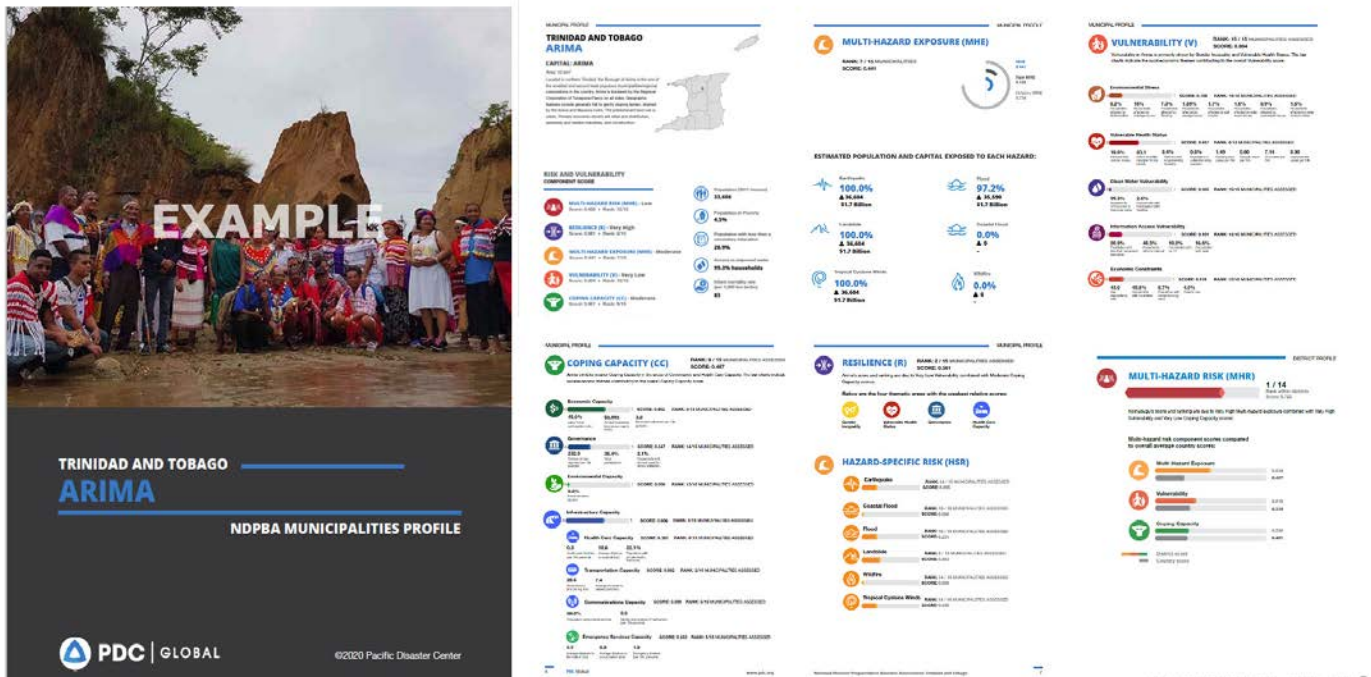Guiding Principle(s)
(b), (c), (e), (f), (h), (j)

SDGs
9, 11, 13

Limited or No Capacity | Early Capacity Development | Achievement with Significant Limitation | Substantial Progress with Some Limitation | Advanced Capacity

www.pdc.org/ndpba

# Unique Assessment Benefits

## Subnational Assessments

PDC provides a comprehensive risk and vulnerability analysis as well as supporting recommendations for each administrative area at the subnational level. This helps promote greater inclusivity and resilience by offering insight into the issues affecting unique geographies and community groups which can often be overlooked at a national level.



EXAMPLE RVA RESULT: ARIMA MUNICIPALITY

## National Recommendations and 5-Year Plan



The baseline assessment culminates with a set of national recommendations that are developed in partnership with country stakeholders. These actions are prioritized to take place over a period of five years and presented as a 5-Year Plan of Action.

## Project Milestones
# 12-Month Timeline

The NDPBA is a stakeholder-driven assessment that is designed to take place over a 12-month period and includes the following key milestones and engagements.
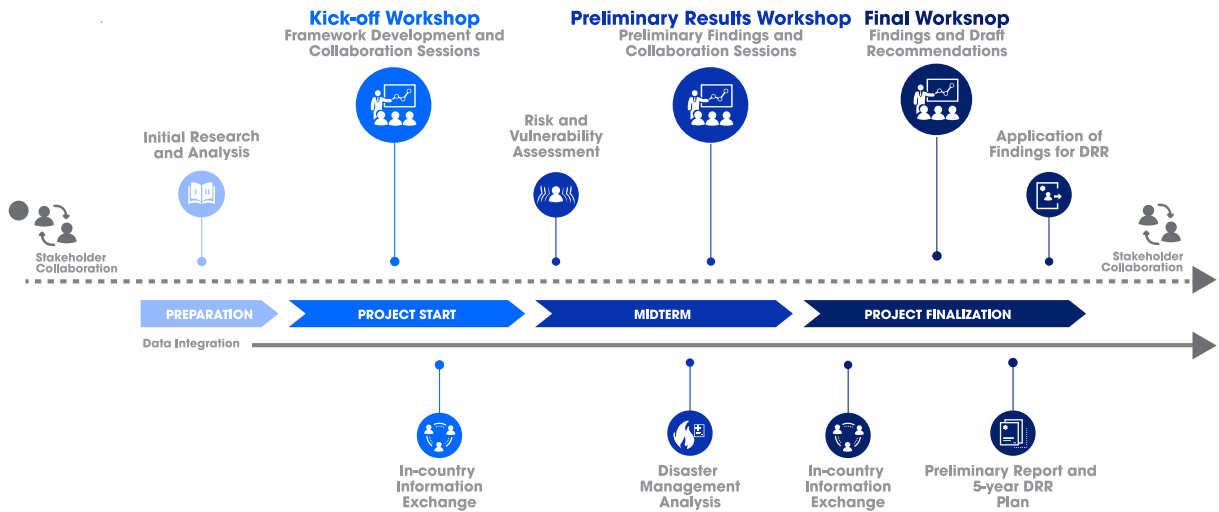


## What next?
# Measuring Results Over Time

While the NDPBA provides the necessary baseline to understand risk and map future actions, PDC's Risk Reduction and Advanced Analytics (R2A2) is the mechanism designed to measure progress over time. Following a five-year period in which countries work to implement NDPBA recommendations, PDC re-engages at year six with national stakeholders to measure the effectiveness of actions taken over the five-year period and work together on new capacity-building initiatives.
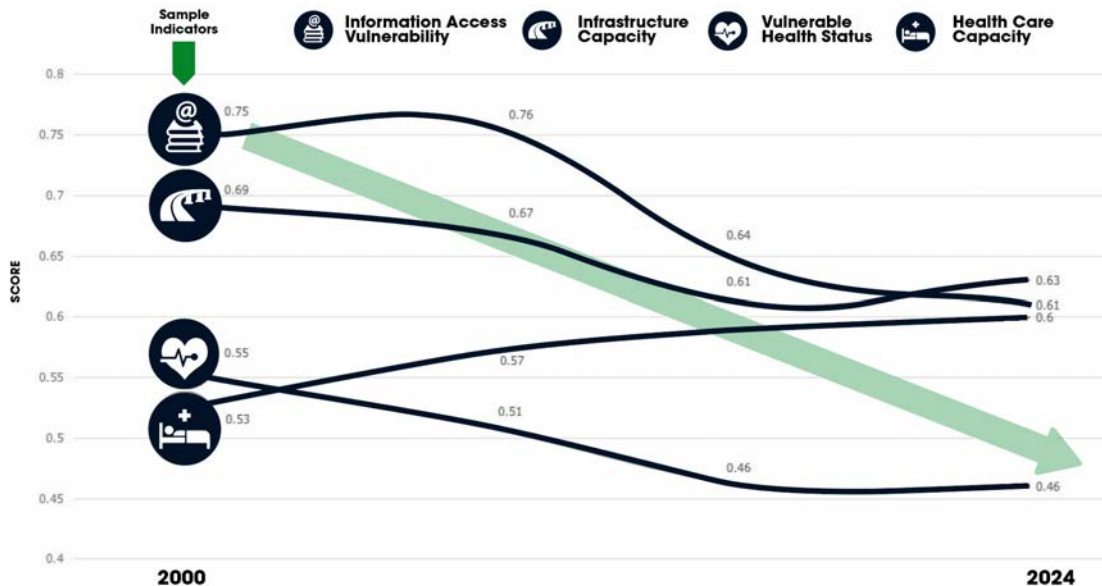
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# Risk Reduction and
# **Advanced Analytics**

After performing a baseline data update in partnership with country stakeholders, PDC provides a trend analysis of risk and vulnerability at the national and subnational level, along with a comparison of disaster management capacities.

## Example Analtyics



## Risk and Vulnerability Trend Analysis

# Working together to build a
## safer world.