

## Flood Disaster Preparedness Indices (FDPI)

**Challenge:** Disaster preparedness

**Adaptation response:** Disaster response

### Description

Flood Disaster Preparedness Indices (FDPI) can be used to assess the preparedness of a local community to tackle flood situations. FDPI is a project, and is currently being implemented by a number of organizations, including the International Centre for Water Hazard and Risk Management (ICHARM), the Typhoon Committee of the World Meteorological Organization (WMO), and the UN Economic and Social Commission for Asia and the Pacific (UNESCAP). FDPI is made up of eight indices, each affiliated to a different aspect of flood disaster preparedness. The indices are: state of infrastructure, mitigation plans, mitigation systems, evacuation plans, recovery plans, information and education, collaboration, and community strength. They are based on self-assessment, replying to a number of questions related to each aspect. The self-assessment questionnaire is available on an online platform.

Completed assessments include a series of figures and charts that visually depict the degree of flood preparedness. The results also provide information to decision makers on improvement of their holistic flood disaster preparedness plans to ensure maximum safety and minimum risk.

### Implementation

Authorities or managers of disaster management teams are best placed to undertake the self-assessments. To avoid bias, a suitable third party may, for example an international relief organization or community representative, should also fill in the questionnaire for comparative purposes. Analysing the results of the questionnaire can help identify areas of weakness in disaster response preparedness. Next, local decision makers should carry out a consultation on methods to improve flood disaster preparedness. The consultation should also include all stakeholders. This should be followed by concrete steps and investments to address weaknesses. The questionnaire can be repeated at regular intervals to track progress and assess progress.

### Environmental Benefits

- Addresses weaknesses promptly and mitigates flood damage to local ecosystems.

### Socioeconomic Benefits

- Provides for participation and local ownership of disaster preparedness management and promotes a community-based approach to disaster management.
- Helps with early identification of weaknesses in disaster response plans and assists communities to be better prepared, resilient and responsive to disaster events, thus reducing health risks, mortality rates and physical damages to infrastructure.

### Opportunities and Barriers

#### Opportunities:

- Low cost technology – the assessment can be done in a relatively short timeframe based on locally available knowledge
- Provides climate change adaptation benefits through improved resilience and preparedness

- Helps minimize high costs of post-disaster relief efforts and addresses disaster response weaknesses early
- Communities maintain ownership and responsibility, and have the opportunity to reflect and improve disaster risk management plans.

## Barriers:

- Computer and internet access could be difficult in remote regions of developing countries
- There are distinct meteorological, socio-economic, linguistic and cultural differences to consider in local settings, which may not be addressed by a standardized questionnaire
- Filling the questionnaire requires good local understanding and knowledge. Responders may include some level of bias.

## **Implementation considerations\***

Technological maturity:	2-3
Initial investment:	1
Operational costs:	1
Implementation timeframe:	1-2

\* This adaptation technology brief includes a general assessment of four dimensions relating to implementation of the technology. It represents an indicative assessment scale of 1-5 as follows:

*Technological maturity:* 1 - in early stages of research and development, to 5 – fully mature and widely used

*Initial investment:* 1 – very low cost, to 5 – very high cost investment needed to implement technology

*Operational costs:* 1 – very low/no cost, to 5 – very high costs of operation and maintenance

*Implementation timeframe:* 1 – very quick to implement and reach desired capacity, to 5 – significant time investments needed to establish and/or reach full capacity

This assessment is to be used as an indication only and is to be seen as relative to the other technologies included in this guide. More specific costs and timelines are to be identified as relevant for the specific technology and geography.



### Sources and further information

APAN (2014). Flood Disaster Preparedness Indices (FDPI). Asia Pacific Adaptation Network (APAN). Available at: <http://www.apan-gan.net/adaptation-technologies/database/flood-disaster-preparedness-indices-fdpi>

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