# Akshvi: Digital Infrastructure for Climate Resilience and Risk Reduction

Converging Climate, DRR, and Governance for Local Action on Loss and Damage

## Policy silos between climate and disaster frameworks.

Today, most countries, including India do not see convergence of their Climate Change plans with Disaster Risk Reduction and hence, lacking overarching national or state level policies that can equip communities to mitigate, adapt and sustain frequent occurrences of disasters and changing weather patterns.

## Lack of comprehensive economic loss data

According to a study published in 2021, data on economic losses from natural disasters have been sparse since 1990 to 2020. Data was missing for about 96.2% of the disasters that occurred between 1990-2020 for reconstruction costs, 88.1% on insured damages and 41.5% on total estimated damages.

## Need for integrated governance and finance mechanisms.

When it comes to answering who is liable for loss and damages from disasters, often the dialogue remains centered at welfare policy and governments. However, due to limited funding and immense financial stress, countries like India can adopt a public-private approach towards relief, mitigation and adaptation.

## Globally, an increased trend in frequency of weather related emergencies

In the last 20 years, UN saw an 800% increase in appeal for weather extremities related appeals.

## Funding gaps for losses and damages from disasters

Developing nations are increasingly orchestrating a dialogue for financial support to cover losses and damages caused by climate change induced disasters. An Oxfam study found that in the past 5 years, only 54% of UN appeals on weather related emergencies were funded leaving a gap of $28–$33bn.

## Affecting those already deprived and have subsistence means of livelihoods

South Asia Disaster Reports from 2016 reveal that high level of subsistence livelihoods are increasingly being affected due to heavy dependence on seasonal weather such as rain-fed agriculture, thus pushing populations further into socio-economic deprivation.

# Why India (and others) Need a Digital Loss & Damage Platform

**Akshvi bridges institutional gaps in loss tracking, supports evidence-based DRR financing, and promotes household-level agency.**

**Affected communities**

Lack of community driven data reporting

Lack of a public registry easily available for affected persons
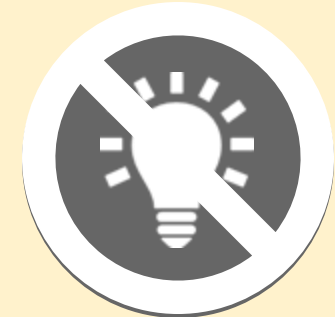
Limited loss data to bridge economic loss gaps

**Governments and donors**

Delayed and time consuming assessments

Insufficient insights on cumulative losses to identify areas of support for resilience

Lack of a real-time ecosystem platform to interact, collaborate and register

# Key Gaps in Humanitarian Action

Delayed assessments → hinder early action & recovery.

Lack of granular data → difficult to target vulnerable groups.

Donor fatigue & fragmentation → reduce aid efficiency.

Low localization of aid → undermines community resilience.

📌 Need: A platform like Akshvi can create community-owned disaster wallets, offering verified, geo-tagged, and dynamic insights to inform planning, funding, and delivery.

# Can technology help?

- To find a solution that can work at scale
- To be able to embrace diversity
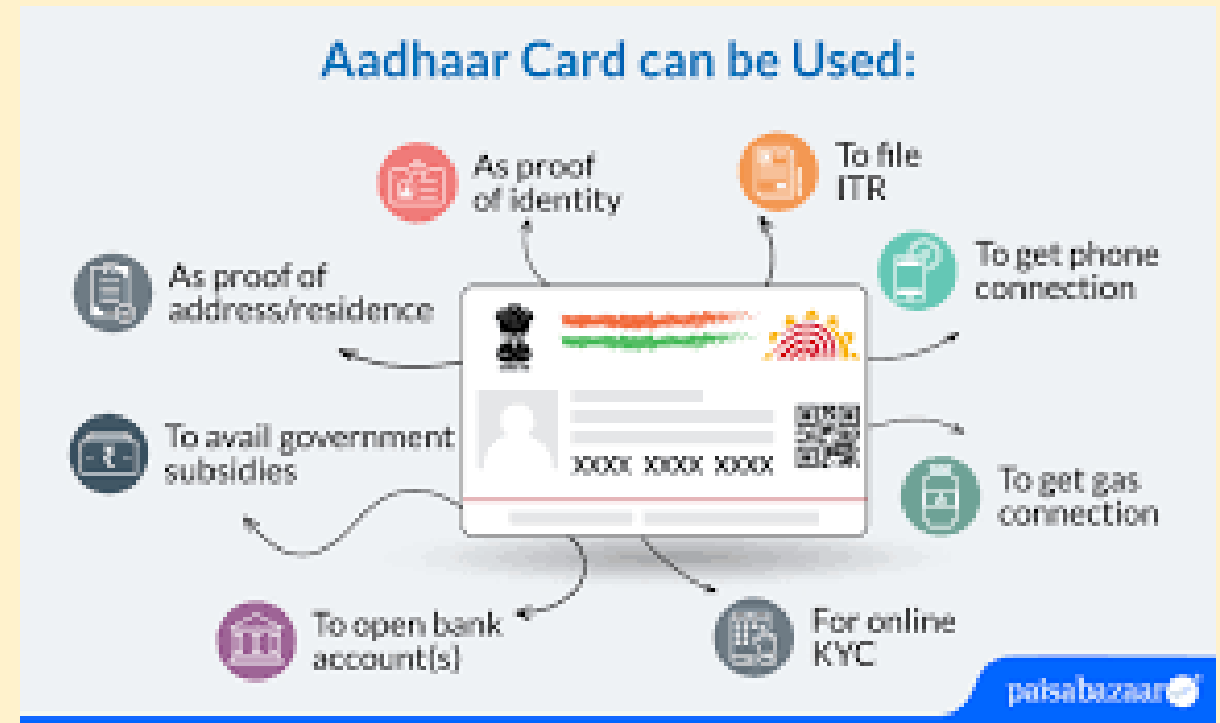- To be able to ensure inclusion and agency

**What if *affected* communities become part of the process.**

# 3 basic questions that can trigger bottom-up action

**1. GPS: Where are you?**



**2. Identity: Who are you?**

*We know you have been affected* – **3. What <u>state</u> are you in?**

# Creating Household Disaster 'Wallets'



1. Verified credentials of household, including geographic location
2. Economic Value of losses for household
3. Non-economic Data, Sentiments at household level
4. Assistance received from external agencies.
5. Micro-services directly to affected households

# Household wallets *to* National L&D database *to* Digital platforms

**AGENCY:** Enabling households to self-report their (vulnerability and loss) data

**SCOPE:** Creating an ID for the household to capture a 360⁰ view of their loss

**SCALE:** Targeting all vulnerable households at population scale

# The targeted use-cases span multiple stakeholders in the ecosystem

| | Preparedness | Rescue & Relief | Recovery & Reconstruction | |
|---|---|---|---|---|
| **Households / MSMEs** | Report Baseline Data | Report immediate Household needs | Report Household losses | View eligible benefit schemes and alloted benefits |
| **Gram Panchayat** | Assist in Baseline Data collection | Conduct Rapid Needs Assessment | Verify Reported Losses | Plan and disburse funds for recovery |
| **NDMA/ SDMA/ DDMA** | Identify Vulnerable Households | Drive/coordinate Relief Distribution | Consolidate Reported Household Losses (under PDNA) | |
| **NGOs** | Assist Vulnerable Households to Build Back Better | Drive/coordinate Relief Distribution | Identify and facilitate recovery needs | |
| **Line Depts (of Govt)** | Collect baseline data of different sectors | | Identify and report Infrastructure Loss/Needs (under PDNA) | |
| **Insurance firms** | Identify vulnerable households | | Verify Insurance claims | |
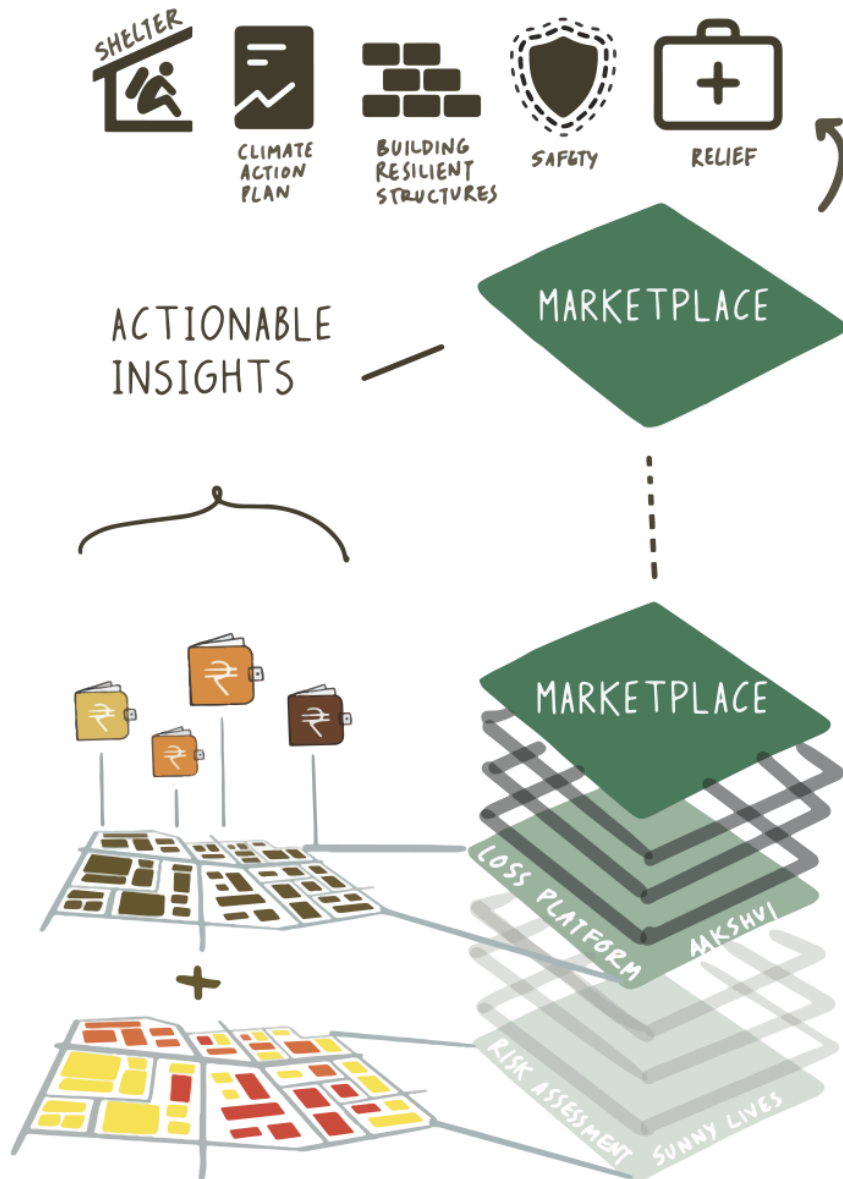
The digital public infrastructure that enables affected communities – visibility, credibility, and direct need-based access to assistance in emergencies, in recovery and for early action.

# Akshvi's Relevance to Global DRR and Climate Governance Efforts

**Supports Risk-Informed Governance**

Enables household-level loss and damage data capture

Aligns with the **Sendai Framework** call for disaggregated disaster data

Contributes to **systemic risk understanding** and **policy coherence**

**Enables Data for Finance & Resilience Planning**

Feeds into **Disaster Tracking System (DTS)** architecture

Informs **climate finance access** through verified economic/non-economic loss data

Compatible with **Santiago Network** and **Loss & Damage Fund** needs

**Scalable Digital Public Infrastructure**

Piloted in India; adaptable across Asia-Pacific and Global South

Complements **Climate Readiness Assessment Tool** and **MCR2030 resilience diagnostics**

Empowers local governments and communities with agency, visibility, and real-time access

# Thank You

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